

**IN THE UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

SPECTRALYTICS, INC.,)	
)	
Plaintiff,)	
)	
vs.)	Civil Action No. 05-1464 (PJS/RLE)
)	
CORDIS CORPORATION, and)	
NORMAN NOBLE, INC.,)	
)	
Defendants.)	

**SPECTRALYTICS' OPPOSITION TO DEFENDANTS' POST-TRIAL MOTION
FOR JUDGMENT AS A MATTER OF LAW, OR IN THE ALTERNATIVE, FOR
REDUCTION OR REMITTITUR OF DAMAGES OR FOR A NEW TRIAL**

TABLE OF CONTENTS

TABLE OF CONTENTS	i
TABLE OF AUTHORITIES.....	iv
I. DEFENDANTS' JMOL MOTION SHOULD BE DENIED ON ALL ISSUES.....	7
A. JMOL Standard	7
B. Defendants Are Not Entitled to JMOL on the Issue of Infringement	8
1. The Evidence at Trial Supports the Jury's Infringement Verdict	8
2. Defendants' JMOL Motion is Based on Attorney Argument and Theories that are Unsupported by the Evidence.....	14
a. No Evidence Supports Defendants' Tolerance Theory	14
b. Machinery's Handbook	15
C. Defendants Are Not Entitled to JMOL on the Issue of Obviousness	16
1. The Standard JMOL Analysis Applies to Obviousness.....	16
2. Reasonable Jurors Could Have Concluded That Defendants Had Failed to Satisfy Their Burden of Proving Invalidity By Clear and Convincing Evidence.....	18
a. Defendants Incorrectly Argue That the Court Should Rely On its Own Credibility Determinations and Weighing of the Evidence	18
b. Viewed in the Light Most Favorable to the Verdict, the Facts Show That Defendants Failed to Clearly and Convincingly Prove That the Claimed Invention Would Have Been Obvious at the Time the Invention Was Made.....	19
(1) Substantial Evidence Shows That Claim 1 of the '277 Patent Went Against the Conventional Wisdom in the Art.....	20
(2) Substantial Evidence Shows Other Objective Indicators That the Jury Was Entitled to Rely On in Rejecting Defendants' Obviousness Defense.....	24
c. Defendants' Challenges Do Not Create Clear and Convincing Evidence of Obviousness	32

(1)	The Jury Was Entitled to Reject the Testimony of Muller, Press and Dunbar Regarding Alleged Prior Development	33
(2)	Madsen Did Not Admit That the Invention Would Have Been Obvious At the Time the Invention Was Made	38
d.	The Evidence is Even Stronger in Favor of Plaintiff Now Than When the Court Denied Defendants' Motion for Summary Judgment	40
D.	Defendants Are Not Entitled to JMOL on the Issue of Willfulness	42
1.	Defendants' Motion is Barred By Their Failure to Move for Directed Verdict on the Issue	42
2.	The Verdict of Willful Infringement Was Supported by Clear and Convincing Evidence	43
a.	High Likelihood of Infringement	43
b.	High Likelihood of Patent Validity	43
c.	Defendant's Awareness of the Patent	44
d.	Defendants Knowledge of Infringement and Validity	45
E.	Defendants are Not Entitled to JMOL on the Issue of Damages	46
1.	Legal Standard.....	47
2.	The Jury Was Permitted to Award Damages on the Basis of a Running Royalty for the Use of the Patented Invention	48
a.	There is No Legal Requirement for Evidence of Industry Practice.....	48
b.	Spectralytics Presented Evidence of Use-Based Royalties in the Industry	51
c.	Substantial Evidence Supports the Jury's Use-Based Damages Award	53
(1)	The Hypothetical Negotiation.....	53
(2)	Other Georgia-Pacific Factors	55
3.	The Jury Was Permitted to Adopt a Royalty Rate That Was Between That Proposed By Spectralytics and the Defendants	58
II.	DEFENDANTS' REQUEST FOR REMITTITUR SHOULD BE DENIED.....	60
III.	DEFENDANTS' REQUEST FOR A NEW TRIAL SHOULD BE DENIED	60

A.	Legal Standard.....	60
B.	The Verdict Was Not Against the Weight of the Evidence	61
C.	There Was Nothing Improper About Spectralytics' Presenting Evidence of Copying.....	62
D.	Defendants Have Wholly Failed to Show That Any of the Alleged Mis-Statements During Closing Arguments Merit a New Trial	63

TABLE OF AUTHORITIES

Cases

<u>Alholm v. Am. Steamship Co.</u> 144 F.3d 1172 (8th Cir. 1998)	61, 64
<u>Arkie Lures, Inc. v. Gene Larew Tackle, Inc.</u> 119 F.3d 953 (Fed. Cir. 1997)	23, 24
<u>Billingsley v. City of Omaha</u> 277 F.3d 990 (8th Cir. 2002)	61, 63
<u>Butler v. French Trucking Co.</u> 83 F.3d 942 (8th Cir. 1996)	60
<u>Canny v. Dr. Pepper/Seven-Up Bottling Group, Inc.</u> 439 F.3d 894 (8th Cir. 2006)	42
<u>Cardiac Pacemakers</u> , 381 F.3d at 1376	17
<u>Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.</u> 381 F.3d 1371 (Fed. Cir. 2004)	17, 18
<u>Celeritas Tech., Ltd. v. Rockwell Int'l Corp.</u> 150 F.3d 1354 (Fed. Cir. 1998)	48
<u>Conseco Finance Servicing Corp. v. N. Am. Mortgage Co.</u> 381 F.3d 811 (8th Cir. 2004)	42
<u>Dairy Farmers of Am., Inc. v. Travelers Ins. Co.</u> 391 F.3d 936 (8th Cir. 2004)	47
<u>Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.</u> 464 F.3d 1356 (Fed. Cir. 2006)	20
<u>Eli Lilly & Co. v. Aradigm Corp.</u> 376 F.3d 1352 (Fed. Cir. 2004)	17
<u>Fiskars, Inc. v. Hunt Mfg. Co.</u> 279 F.3d 1378 (Fed. Cir. 2002)	57
<u>Fuji Photo Film Co., Ltd. v. Jazz Photo Corp.</u> 394 F.3d 1368 (Fed. Cir. 2005)	59
<u>Gambro Lundia AB v. Baxter Healthcare Corp.</u> 110 F.3d 1573 (Fed. Cir. 1997)	31
<u>Graham v. John Deere Co.</u> 383 U.S. 1 (1966)	19, 23
<u>Grain Processing Corp. v. Am. Maize-Prods. Co.</u> 185 F.3d 1341 (Fed. Cir. 1999)	57

<u>Hathaway v. Runyon</u>	
132 F.3d 1214 (8th Cir. 1997)	7
<u>Hearing Components, Inc. v. Shure, Inc.</u>	
Civ. No. 9:07-cv-104, 2009 U.S. Dist. LEXIS 17168 (E.D. Tex. Mar. 6, 2009).....	18
<u>Hoescht Celanese Corp. v. BP Chems. Ltd.</u>	
78 F.3d 1575 (Fed. Cir. 1996)	42, 43
<u>Iron Grip Barbell Co. v. USA Sports, Inc.</u>	
392 F.3d 1317 (Fed. Cir. 2004)	29
<u>Juicy Whip v. Orange Bang</u>	
292 F.3d 728 (Fed. Cir. 2002)	33
<u>Kaufman Co., Inc. v. Lantech, Inc.</u>	
926 F.2d 1136 (Fed. Cir. 1991)	48
<u>Kinetic Concepts, Inc. v. Blue Sky Med. Group, Inc.</u>	
554 F.3d 1010 (Fed. Cir. 2009)	17
<u>KSR Int'l Co. v. Teleflex Inc.</u>	
550 U.S. 398 (2007)	20, 23
<u>Mars, Inc. v. Coin Acceptors, Inc.</u>	
527 F.3d 1359 (Fed. Cir. 2008)	56
<u>McGinley v. Franklin Sports, Inc.</u>	
262 F.3d 1339 (Fed. Cir. 2001)	18, 20, 23, 24
<u>Mears v. Nationwide Mut. Ins. Co.</u>	
91 F.3d 1118 (8th Cir. 1996)	7
<u>Micro Chem., Inc. v. Lextron, Inc.</u>	
317 F.3d 1387 (Fed. Cir. 2003)	47, 50, 56, 59
<u>Minco, Inc. v. Combustion Eng'g, Inc.</u>	
95 F.3d 1109 (Fed. Cir. 1996)	49, 50, 56
<u>Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.</u>	
976 F.2d 1559 (Fed. Cir. 1992)	47, 59
<u>Nicks v. Missouri</u>	
67 F.3d 699 (8th Cir. 1995)	7
<u>Perkin-Elmer Corp. v. Computervision Corp.</u>	
732 F.2d 888 (Fed. Cir. 1984)	17
<u>Pharmastem Therapeutics, Inc. v. Viacell, Inc.</u>	
491 F.3d 1342 (Fed. Cir. 2007)	17, 18
<u>Pointer v. DART</u>	
417 F.3d 819 (8th Cir. 2005)	61

<u>Polansky v. CNA Ins. Co.</u>	
852 F.2d 626 (1st Cir. 1988)	68
<u>Reeves v. Sanderson Plumbing Products, Inc.</u>	
530 U.S. 133 (2000)	7, 8, 19, 24
<u>Rite-Hite Corp. v. Kelley Co., Inc.</u>	
56 F.3d 1538 (Fed. Cir. 1995)	47
<u>Rothman v. Target Corp.</u>	
No. 2008-1375, 2009 U.S. App. LEXIS 2829 (Fed. Cir. Feb. 13, 2009).....	18, 40
<u>Sanofi-Synthelabo v. Apotex, Inc.</u>	
550 F.3d 1075 (Fed. Cir. 2008)	19
<u>Stickle v. Heublein, Inc.</u>	
716 F.2d 1550 (Fed. Cir. 1983)	48, 50, 52
<u>Stratoflex, Inc. v. Aeroquip Corp.</u>	
713 F.2d 1530 (Fed. Cir. 1983)	29
<u>Takeda Chem. Indus. v. Alphapharm Pty., Ltd.</u>	
492 F.3d 1350 (Fed. Cir. 2007)	16
<u>Tennant v. Peoria and Pekin Union Ry.</u>	
321 U.S. 29 (1944)	61
<u>Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.</u>	
308 F.3d 1167 (Fed. Cir. 2002)	42
<u>Unisplay, S.A. v. Am. Elec. Sign Co., Inc.</u>	
69 F.3d 512 (Fed. Cir. 1995)	59
<u>United States v. Adams</u>	
383 U.S. 39 (1966)	20, 23, 24
<u>Vanskike v. Union Pacific R.R. Co.</u>	
725 F.2d 1146 (8th Cir. 1984)	61, 64
<u>Wright v. Hoover</u>	
329 F.2d 72 (8th Cir. 1964)	47
Statutes	
35 U.S.C. § 284	49
Rules	
Fed. R. Civ. P. 50(a)(1)	7
Fed. R. Civ. P. 59.....	60

I. DEFENDANTS' JMOL MOTION SHOULD BE DENIED ON ALL ISSUES

A. JMOL Standard

"A court should not set aside a jury's verdict lightly." Nicks v. Missouri, 67 F.3d 699, 704 (8th Cir. 1995). Under Rule 50 of the Federal Rules of Civil Procedure, judgment as a matter of law may be granted when "a party has been fully heard on an issue during a jury trial and the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue." Fed. R. Civ. P. 50(a)(1). The Eighth Circuit has interpreted this language to mean that JMOL is proper "only when there is a complete absence of probative facts to support the conclusion reached so that no reasonable juror could have found for the nonmoving party." Hathaway v. Runyon, 132 F.3d 1214, 1220 (8th Cir. 1997) (internal quotations omitted); see also Mears v. Nationwide Mut. Ins. Co., 91 F.3d 1118, 1122 (8th Cir. 1996) (JMOL requires that "all the evidence points in one direction and is susceptible to no reasonable interpretation supporting the jury verdict.").

In Reeves v. Sanderson Plumbing Products, Inc., the Supreme Court clarified how a court is to review the record in considering a motion for JMOL after a general jury verdict. 530 U.S. 133 (2000). The Court held that "in entertaining a motion for judgment as a matter of law, the court should review all of the evidence in the record." Id. at 150. "In doing so, however, the court must draw all reasonable inferences in favor of the nonmoving party, and it may not make credibility determinations or weigh the evidence." Id. (citations omitted). The court must "disregard all evidence favorable to the moving

party that the jury is not required to believe. That is, the court should give credence to the evidence favoring the nonmovant as well as that evidence supporting the moving party that is uncontradicted and unimpeached, at least to the extent that that evidence comes from disinterested witnesses." Id. at 151 (citations and internal quotations omitted).

B. Defendants Are Not Entitled to JMOL on the Issue of Infringement

1. The Evidence at Trial Supports the Jury's Infringement Verdict

The only infringement issue presented to the jury was whether the bushing in the accused follower assembly has "a central bore which is sized to be slightly greater than an outside diameter of the stock tubing." The Court instructed the jury that (1) a bushing meets this limitation if, "*after the stock tubing has been inserted* into the bushing's central bore, the bore's inner diameter is slightly greater than the stock tubing's outer diameter;" and (2) "[w]hether the bore's inner diameter is 'slightly greater than' the stock tubing's outer diameter is to be assessed at the scale that would matter to a person of ordinary skill in the art." Docket No. 361 at 5 (emphasis added).

Based on this instruction, a reasonable jury could conclude by a preponderance of the evidence that the follower assembly infringed claim 1. The jury's verdict is supported by the testimony of expert and lay witnesses as well as Norman Noble's business records showing the intended and actual dimensions of the bushing and stock tubing.

Spectralytics' expert Patrick Madsen qualifies as a person skilled in the art of the invention. See Trial Transcript ("Tr.") 906. During the mid-1990s, Madsen was employed by SciMed (now part of Boston Scientific) where he was responsible for

research and development into new machines and methods to cut stents with lasers. Tr. 916. In that capacity, Madsen had firsthand experience in the sizing of Teflon bushings, such as those used in Norman Noble's follower assembly, for use in a laser cutting apparatus to cut stents. Tr. 917–18. Madsen was the only person skilled in the art who opined at trial on the question of infringement.

Madsen testified that in his opinion, the follower bushing bore is larger than the stock tubing after the tubing is inserted into the bushing bore. Tr. 928. He explained that, even with a Teflon bushing, if the bore remained *exactly* the same as the tubing diameter, the edges of the two pieces would interfere with each other and the tubing could not enter the bushing. Tr. 930. Madsen testified that, while it is possible to *force* a tubing into a Teflon bushing that had the same diameter before assembly, doing so either shaved away the bushing or caused it to expand. Tr. 928–29. In either case, the result of forcing the tubing into the bushing is that the bushing bore is slightly greater than the stock tubing after the parts are assembled. Tr. 929–31. Defendants agree with Madsen's analysis in their JMOL brief when they state that "Jeff Miller explained that the elasticity of the Teflon bushing allows it to compress when tubing is slid through it, and thus accommodate tubing in which the OD is larger, not smaller, than the ID of the bushing." Docket No. 390 ("Defendants' Brief") at 34 (citing Tr. 1784).

In support of his infringement opinion, Madsen explained his experience with sizing Teflon bushings while at SciMed. Tr. 917–19. He testified that SciMed used steel bushings when he began to work there and that he undertook a project to determine whether it would be more economical to instead use bushings made out of Teflon. Tr.

917–18. Madsen said that he found that although initially the Teflon bushings were very snug, they very rapidly developed "slop" and became unusable within a single day. Tr.

918–19. Because Teflon is a softer material than steel, Madsen said the stock tubing abraded the bushing bore and machined away bushing material, leading to the slop or excess gap between the bushing bore and the stock tubing. Tr. 919.

In further support of his opinion, Madsen relied on Norman Noble's work instructions for sizing bushings and its daily measurements of the bushings. Tr. 935–36, 940–41; P-121; P-123. He testified that Noble's work instructions tell the technicians that, in sizing a bushing, they start with a bushing that is sized .002 (2/1,000) of an inch smaller than the stock tubing. Tr. 934. Noble witnesses testified that they hand reamed the bushing for about two minutes, running the tubing back and forth until, based on feel alone, they determined that the bore and the diameter were the same. Tr. 1176–77, 1181–82, 1184–86. Thus, in two minutes of reaming the technicians removed more than six times the allowable tolerance for the bushing in use. Madsen's experience led him to conclude that, in use, the bushing would rapidly wear away under the force of the stock tubing moving back and forth. Tr. 918–19, 946.

Madsen further testified that the work instructions told Noble's technicians to measure the bushings every day and to continue to use the bushings until the bushing bore measured greater than 3/10,000 of an inch larger than the tubing diameter even *before* the two parts were assembled. Tr. 940–43. Madsen's testimony established that Noble's bushing was used until it was *greater* than 3/10,000 of an inch larger than the

stock tubing before the two were assembled. Tr. 942–43; P-240 (Specification for Bushing ID "0.0003 or less").

Finally, Madsen testified that Noble's bushing measurements confirmed that, the vast majority of the time, the bushing bore was larger than the stock tubing *even before assembly*. Tr. 959. Because Noble did not produce the 1,700 pages of documents containing these measurements until two weeks before trial, Madsen did not have an opportunity to analyze every single measurement. Tr. 944–46. On direct examination, however, Madsen testified about the analysis he had performed on one machine over a period of 32 days. Tr. 954. With respect to that machine, Madsen said that on 93% of the days, the bushing bore was larger than the stock tubing *before* the stock tubing was inserted in the bushing. Tr. 959. Madsen emphasized that this did not show that Noble infringed only 93% of the time, but rather that 93% of the time infringement was documented before the tubing and the bushing were assembled. Tr. 959. In all cases, the bushing bore must be larger than the tubing diameter after assembly. Tr. 967–68.

More than a week after Madsen gave this testimony, Defendants presented the testimony of their damages expert Vincent Thomas, who, during trial, had assigned a team of five analysts to work for five days each, in an effort to apply the Madsen methodology to the entire 1,700 pages of Noble measurements. See Tr. 2383–84. These analysts concluded that if one examined all machines on all days, the bushing bore was larger than the stock tubing diameter before assembly 79% of the time. Tr. 2388. Thomas therefore confirmed Madsen's basic conclusion that on the overwhelming majority of days, Noble's measurements showed that the bushing bore was larger than the

stock tubing even before the parts were assembled. After Thomas testified, Madsen returned to the stand and testified that he remained convinced, for the reasons stated above, that every bushing would be larger than the stock tubing after the two were assembled. Tr. 2667.

There was also more than substantial evidence showing that the bushing was not merely larger, it was larger in an amount that mattered to one of ordinary skill in the art. First, Madsen, Gustafson and Oberg all testified that once the hand-reaming process was completed so as to achieve the desired "feel," the bushing diameter would be larger in an amount that mattered to those skilled in the art. Tr. 614, 711, 926, 930–31.

Second, the evidence showed that size differences smaller than 1/10,000 of an inch matter to persons of ordinary skill in the art. Madsen testified that mechanical engineers are trained and experienced at measuring and accounting for very small sizes that would be considered insignificant in most walks of life. Tr. 948. For example, he explained that in his current position as a Director of Engineering at Hutchinson Technologies, tolerances of 6/100,000 of an inch are required for tooling used to make suspension assemblies for computer disk drives. Tr. 913.

Madsen further testified that 1/10,000 of an inch can have a huge effect on cutting accuracy when making a stent. Tr. 948–51. He explained that because of a phenomenon known as projection error, any gap between the bushing and the stock tubing is magnified in the distance between the bushing and the laser beam, resulting in error and inaccuracy in the stent design. Id. He said that the manufacturer's specifications for stents express the dimensions of a stent design in units of 1/10,000 of an inch. Tr. 948. And further,

Noble's documents require technicians to measure the bushing bore in units of 1/10,000 of an inch, and Noble's actual bushing measurements are expressed in 1/10,000 of an inch. See P-240.1.

Other witnesses corroborated Madsen's testimony. The inventor of the '277 patent, Gary Gustafson, testified that a difference of 1/10,000 between the bushing and the tubing would qualify as "slightly greater than." Tr. 651–52. Gary Oberg told the jury that "even a tenth of a thousandth makes a difference" when making stents. Tr. 543. In fact, Oberg testified that Spectralytics measures stent dimensions to 17/1,000,000 of an inch. Tr. 411. Defendants' witnesses likewise testified that the scale that matters is 1/10,000 of an inch, or even smaller. Bill Dobbins of Cordis's subsidiary NDC testified that it was absolutely critical that positions be accurately maintained to tolerances of .001 millimeter, which is *significantly less* than 1/10,000 of an inch. Tr. 2240. Former Cordis employee Joe Gruschacz testified that 1/10,000 of an inch mattered in the industry. He explained that Noble was "able to do the plus or minus 1/10,000 of an inch, and we weren't getting that from anybody else." Tr. 2513.

Reviewing this record as a whole, there is overwhelming evidence from which a reasonable jury could conclude that the bushing bore in the follower is slightly greater than an outside diameter of the stock tubing at a scale that matters to a person of ordinary skill in the art.

2. **Defendants' JMOL Motion is Based on Attorney Argument and Theories that are Unsupported by the Evidence**

Against the overwhelming weight of evidence, Defendants argue in their JMOL motion that the jury's infringement verdict should be reversed based on two novel theories that were never supported by evidence at trial. First, they contend that Noble's bushing measurements were so fraught with error that no reasonable jury could conclude that they were accurate or return a reasonable verdict of infringement based upon them. Defendants' Brief 34–35. Second, they contend that infringement should be determined based upon whether the so-called "fit" between the bushing and the tubing qualifies as a "clearance fit" under the definitions of a reference text, Machinery's Handbook, which explicitly describes dimensions of the parts *before* they are assembled rather than after. Id. at 34–36. Defendants are wrong on both points.

a. **No Evidence Supports Defendants' Tolerance Theory**

On the first issue, Defendants argued through their cross-examination of Patrick Madsen that errors in the manufacturing and measurement of their bushings and their tubing were such that it was impossible to determine whether or not the bushings were larger than the stock tubing, even when the recorded measurements said that this was the case. Tr. 1091–96. Significantly, Defendants did not proffer testimony from any competent expert that supported this theory. Moreover, Spectralytics' expert Madsen refuted this theory through his analysis of the bushing measurements, which was largely confirmed by Defendants' damages expert Vincent Thomas.

Madsen testified that he called the manufacturer of Noble's tubing and that they told him that the diameters of Noble's tubing were distributed within a normal bell-shaped curve, centered at the nominal tubing diameter. Tr. 955–56. Based upon this information, he calculated from his sampling of data that 93% of Noble's bushings would be larger than the stock tubing even *before* assembly. Tr. 958–59. Thomas, again, confirmed that when all 1,700 pages were examined, the total was 79%. Tr. 2388. Thus, Noble's documents show that the overwhelming majority of bushings are larger even before assembly, and Madsen testified unequivocally that they are *all* larger after assembly.

b. Machinery's Handbook

The Machinery's Handbook describes "fits" based on the sizes of the bushing and the tubing measured *before* they are assembled, rather than after assembly as the court's claim construction requires. Tr. 1108–09; Docket No. 361 at 5. The teachings of the Machinery's Handbook are therefore irrelevant. To agree with Defendants on this issue, the court must literally reverse its claim construction of the "sized to be" limitation and hold that infringement is measured before assembly.

Contrary to Defendants' arguments, Madsen never agreed that bushings are sized in the real world with reference to the Machinery's Handbook. To the contrary, Madsen criticized the Machinery's Handbook method because it dealt with "sizing in the abstract," which he explained meant sizing before the bushing and tubing were assembled. Tr. 1055, 1058, 1060, 1062–64. There is no evidence that anyone in the stent industry uses these abstract principles in sizing bushings for actual use in cutting stents.

Instead, the evidence at trial established that Spectralytics, Norman Noble, and SciMed all used *feel*, not measurement, to determine whether a bushing was the proper size before cutting stents.

Gary Gustafson testified that when he sized bushings at Spectralytics, he began with a bushing and tube that were closely matched in size and then used a process called lapping, which is virtually identical to hand reaming, to expand the steel bore with diamond grit. Tr. 711; see also Tr. 926 (Madsen explaining lapping process Gustafson described). Gustafson said that he relied on feel to determine when the bushing was properly sized. Tr. 711. Ed Przeracki and Ray Suhy of Norman Noble likewise testified that they sized bushings using hand reaming until they achieved a feel that they recognized as correct. Tr. 1176, 1186. Madsen testified that SciMed used both steel and Teflon bushings and that both were matched to particular tubing by feel. Tr. 1118. No witness testified and no document showed that anyone working with stents ever resorted to the method of Machinery's Handbook to size a bushing.

Thus, Defendants' arguments in support of JMOL are contradicted by the evidence and are wrong. Defendants' motion for JMOL on infringement should be denied.

C. Defendants Are Not Entitled to JMOL on the Issue of Obviousness

1. The Standard JMOL Analysis Applies to Obviousness

Obviousness is a question of law based on underlying facts. Takeda Chem. Indus. v. Alphapharm Pty., Ltd., 492 F.3d 1350, 1355 (Fed. Cir. 2007) (internal quotations omitted). Contrary to Defendants' argument, however, this does not mean that the jury's verdict on obviousness is a mere advisory opinion. When a mixed question of law and

fact is given to a jury without a special verdict form, JMOL must be denied "unless the jury was not presented with substantial evidence to support any set of implicit findings sufficient under the law to arrive at its conclusion." Eli Lilly & Co. v. Aradigm Corp., 376 F.3d 1352, 1362 (Fed. Cir. 2004). Thus, when faced with a motion for JMOL of obviousness, the court must "examine the evidence in the light most favorable to the verdict and determine whether a reasonable jury could have found all the facts necessary to support the verdict of nonobviousness, i.e., whether substantial evidence supports the verdict." Pharmastem Therapeutics, Inc. v. Viacell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007). A verdict of nonobviousness must be sustained unless "there is no legally sufficient evidentiary basis for the jury's verdict." Kinetic Concepts, Inc. v. Blue Sky Med. Group, Inc., 554 F.3d 1010, 1016 (Fed. Cir. 2009) (citation omitted); see also Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 381 F.3d 1371, 1375 (Fed. Cir. 2004).

In deciding a motion for JMOL of obviousness, the court must take into account the accused infringer's burden of proving invalidity by *clear and convincing evidence*. See Cardiac Pacemakers, 381 F.3d at 1376. As the jury was correctly instructed, "[c]lear and convincing evidence is evidence that produces in your minds an abiding conviction that the truth of a factual contention is highly probable." Tr. 3027. Consequently, "[w]here, as here, there is a verdict of validity, the question is not whether the patentee had introduced sufficiently substantial evidence to support the verdict, but whether the challenger's evidence *so met the burden imposed by 35 U.S.C. § 282 . . . that reasonable jurors could not have concluded* that the challenger failed to overcome that burden." Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984)

(emphasis added); see also Hearing Components, Inc. v. Shure, Inc., Civ. No. 9:07-cv-104, 2009 U.S. Dist. LEXIS 17168, at *19–20 (E.D. Tex. Mar. 6, 2009).

2. Reasonable Jurors Could Have Concluded That Defendants Had Failed to Satisfy Their Burden of Proving Invalidity By Clear and Convincing Evidence

a. Defendants Incorrectly Argue That the Court Should Rely On its Own Credibility Determinations and Weighing of the Evidence

In their Brief, Defendants quote comments made by the Court during the trial that express doubt about Spectralytics' case. Because the jury returned a verdict for Spectralytics, however, those comments lose their significance. This was not a bench trial. At the outset of trial, both parties agreed to submit the issue of obviousness to the jury and have the Court review the verdict like any other motion for JMOL. Pretrial Hearing Transcript ("Pretrial Tr.") 259–62. As such, "[t]he essential question is 'whether the jury's verdict is sustainable on the evidence presented, *not whether this court could have or would have gone the other way on the evidence presented.*'" Rothman v. Target Corp., No. 2008-1375, 2009 U.S. App. LEXIS 2829, at *9 (Fed. Cir. Feb. 13, 2009) (quoting PharmaStem, 491 F.3d at 1375) (emphasis added); see also Cardiac Pacemakers, 381 F.3d at 1378. This is particularly true when, as here, the parties agreed to obtain only a general verdict from the jury on the overall issue of obviousness. See McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1356 (Fed. Cir. 2001).

As discussed above, in deciding a motion for JMOL, the Court can only consider what is referred to herein as the "verdict adjusted evidence," i.e., (1) evidence that favors the verdict; and (2) other evidence only to the extent that it comes from a disinterested

party *and* is not contradicted *and* is not impeached. Reeves, 530 U.S. at 151. The Court's comments during trial were not made based on the verdict adjusted evidence and, therefore, are of no bearing here.

b. Viewed in the Light Most Favorable to the Verdict, the Facts Show That Defendants Failed to Clearly and Convincingly Prove That the Claimed Invention Would Have Been Obvious at the Time the Invention Was Made

The question of obviousness is based on the following factual determinations: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level or ordinary skill in the art; and (4) the objective indicia of obviousness and non-obviousness. See, e.g., Sanofi-Synthelabo v. Apotex, Inc., 550 F.3d 1075, 1085–86 (Fed. Cir. 2008) (citing Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966)). The objective indicia includes factors that tend to suggest obviousness or non-obviousness of the invention, including commercial success, long felt but unresolved need, copying, failure of others, etc. Sanofi, 550 F.3d at 1085–86. All of these factual considerations must be taken into account in analyzing obviousness. Docket No. 361 at 13 (Jury Instruction No. 14).

The verdict-adjusted evidence strongly supports the conclusion that the claimed invention would not have been obvious at the time the invention was made. First, there was evidence that the invention went against the conventional wisdom in the art. Such "teaching away" evidence is well recognized as particularly strong evidence of non-obviousness. Moreover, Spectralytics presented evidence on many of the objective indicia of obviousness, which evidence must be accepted as true. When combined with

the burden of proof and Defendants' failure to call a single expert to testify that the claimed invention would have been obvious, the jury was well within its rights to reject Defendants' obviousness defense.

(1) Substantial Evidence Shows That Claim 1 of the '277 Patent Went Against the Conventional Wisdom in the Art

Part of the fact finder's responsibility under the first Graham factor (the scope and content of the prior art) is to determine "what the prior art teaches, whether it teaches away from the claimed invention, and whether it motivates a combination of teachings from different references." Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1360 (Fed. Cir. 2006) (quoting In re Fulton, 391 F.3d 1195, 1199–1200 (Fed. Cir. 2004)). A factual determination that the prior art teaches away from the claimed invention has long been recognized as a strong factor supporting the non-obviousness of an invention. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 416 (2007) (citing United States v. Adams, 383 U.S. 39, 51–52 (1966)); see also McGinley, 262 F.3d at 1353–54. In fact, it is the primary reason that this Court denied Defendants' motion for summary judgment of obviousness and sent this case to trial. Docket No. 151 at 47–48.

Claim 1 of the '277 patent recites an element that is undisputedly not present in *any* of the prior art relied on by Defendants. Specifically, claim 1 requires a workpiece fixture (including a bushing) that is "rigidly carried on the laser cutting tool in a fixed spatial relationship during use of the fixture." Defendants failed at trial to identify any machine or publication that both (1) undisputedly qualified as prior art; and (2) disclosed

the "carried on" limitation.¹ The primary item of prior art relied on by Defendants both at trial and in its JMOL motion—the so-called "1995 LPL machine"—undisputedly does not meet this limitation. Docket No. 151 at 47–48.

There is a reason why Defendants were unable to come forward with evidence of any prior art showing the workpiece fixture carried on the laser cutting tool—because doing so was contrary to the conventional wisdom in the art at the time. Defendants' theme throughout trial was that the claimed invention is nothing more than "Swiss plus lasers." See, e.g., Tr. 186, 194, 218–19, 2900–01, 2914–15, 2934. However, Defendants' own Swiss-machine expert, Paul Huber, testified that the accepted teaching with Swiss machines was that all workpiece fixtures should be attached to a heavy frame so that there could be no loose parts and the fixture would not move. Tr. 2097–98. Huber emphatically testified that mounting the fixture so that it is carried on the laser head, as claimed in claim 1 of the '277 patent, was "contrary to the teachings of the Swiss machines." Tr. 2100–01; see also Tr. 2105.

Defendants now seek to distance themselves from the testimony of their own expert by pointing out that Huber is not an expert in laser cutting stents. Defendants' Brief 23. While it is true that Huber's expertise was limited to Swiss mechanical cutting

¹ In its Brief, Defendants suggest otherwise by pointing to Oberg's testimony regarding his earlier laser welding patent. Defendants' Brief 8. Importantly, however, the pressure foot (which Defendants classify as a workpiece fixture) in that patent was not "carried on" the laser head as that term in claim 1 of the '277 patent has been interpreted. Both Oberg and Madsen testified that the pressure foot was attached to a Z axis or frame member, which supported both the pressure foot and the cutting tool, and not to the laser cutting tool. Tr. 538, 540–41, 2655. Moreover, during use, the pressure foot squeezed two plates—the workpiece—against a table during welding and, therefore, was not attached to and supported by the laser. Tr. 2654.

machines, that fact does not detract from the relevance of Huber's testimony, for at least two reasons.

One, Defendants do not dispute that Swiss machines are within the scope of the relevant art—to the contrary, they were the ones that advocated reliance on the Swiss prior art in the first place! Nor do Defendants dispute that Mr. Huber is qualified as an expert to testify regarding the teachings of the Swiss machine art. Thus, the jury was entitled to rely on Mr. Huber's testimony regarding the conventional wisdom in the Swiss art and to conclude that it taught away from the present invention.

Two, the evidence from trial supports the conclusion that, when people in the stent cutting industry attempted to adopt Swiss-style cutting to laser stent cutting, they clung to the conventional wisdom regarding how the workpiece fixture should be mounted. As discussed in the following section, the developmental history of laser cutting machines by RMS, LPL, and Lasag shows a number of iterations, each of which were considered to be failures. Importantly, in each of those iterations, the designers sought to keep the workpiece fixture steady by firmly attaching it to the heavy table. This remained true up to and including the 1995 LPL machine. Thus, the prior art retained the conventional wisdom from the Swiss art that the workpiece fixture should be mounted to the heaviest, most stable location possible. This is consistent with prior art patents of record that all show the workpieces attached to the base and not carried on the laser cutting tool. P-6; P-7; D-39. This is also consistent with evidence in the record showing that, because laser tools were quite expensive and their optics were very delicate, it was not natural to think of bolting a workpiece fixture on the laser cutting tool. Tr. 523.

As a result, the present case is much more factually similar to the Supreme Court's Adams case than it is to either the KSR or Graham cases relied on by Defendants. In both KSR and Graham, there was absolutely no evidence of teaching away by the prior art. To the contrary, in both cases it was undisputed that all of the features of the claimed inventions were individually known in the prior art and there were specific reasons why ones skilled in the art would be motivated to combine them in the manner claimed in the patents in suit. KSR, 550 U.S. at 424–27; Graham, 383 U.S. at 24–25, 36–37. In contrast, in Adams (a companion case to Graham), the Supreme Court affirmed the trial court's conclusion of non-obviousness because, although all of the features of the claimed invention were individually found to be old in the art, the prior art *taught against* combining those features in the manner that the patentee had. United States v. Adams, 383 U.S. 39, 50–52 (1966); see also McGinley, 262 F.3d at 1354 (noting "that references that teach away cannot serve to create a prima facie case of obviousness" and reversing the district court's grant of JMOL of obviousness); Arkie Lures, Inc. v. Gene Larew Tackle, Inc., 119 F.3d 953, 957–58 (Fed. Cir. 1997) (reversing summary judgment of obviousness because of teaching away evidence).

Similar to the patentees in Adams, McGinley, and Arkie Lures, Gustafson cast the conventional wisdom aside and effectively just dangled the fixture off of the laser-cutting tool so that if the tool moved then the fixture would move with it, or vice-versa. P-1 at col.4 ll.1–4 ("Thus, inadvertent movement of either fixture body 28 and/or laser cutting tool 2 will carry the other component with it to maintain the desired relationship [between them.]"). For the first time ever, someone was willing to let their workpiece fixture move

during the cutting operation instead of trying to prevent any movement whatsoever by fixing everything to a common frame or base. Huber fully expected that Gustafson's invention "wouldn't work as well as Swiss machines." Tr. 2099.

The present case actually presents a stronger case for non-obviousness than Adams, McGinley, and Arkie Lures because, unlike in those cases, all of the features in claim 1 of the '277 patent are not even shown individually in the prior art. There is no "secondary reference" that shows the "carried on" limitation. The fact that this element is not shown in any prior art confirms the teaching away of the prior art.

The Court correctly denied Defendants' summary judgment motion because of the teaching away evidence. Consistent with that ruling, the Court should deny Defendants' JMOL motion for the same reason. See Reeves, 530 U.S. at 150 (equating the JMOL and summary judgment standards).

(2) Substantial Evidence Shows Other Objective Indicators That the Jury Was Entitled to Rely On in Rejecting Defendants' Obviousness Defense

i. Long-Felt Need and Failure of Others

The evidence shows that there was a long-felt and urgent need for an improved way to laser-cut stents. Dr. Palmaz, one of the inventors of the Palmaz-Schatz stent, recognized that lasers could be used to fabricate stents as early as 1985. D-22. However, "laser cutting systems were not yet sophisticated enough to cut tight tolerance geometries," so stent companies such as Cordis relied on EDM machines to make the stents. D-163 at 3; Tr. 274–76. By the early 1990s, increasing complexity in stent

designs "necessitated a move to laser cutting." D-163 at 3. So Cordis set about trying to figure out a way to acceptably laser-cut stents.

The evidence also shows that, despite the need for a viable stent manufacturing process and the extensive resources that were thrown at stent manufacturing, the industry experienced a number of failures, never using the idea of carrying a workpiece fixture to the laser cutting tool. The following is part of a chart from Cordis's own document showing the various failures:

Generation	Developer	Year of Origin	Integrator	Laser Source	Other Relevant Features
0th	Symbiosis	early '90's	Symbiosis	Quantronix Nd:YAG	Brass backstop Crude design Crude controls Out of service (dismantled)
1st	JJIS	early '90's	LPL	LASAG Nd:YAG KLS-126	Tessier "wet" process "Bridgeport" style Crude controls
2nd	rms	1993	LPL	LASAG Nd:YAG KLS-126	Similar to 1st generation in construction; smaller footprint "Swiss" style Crude controls
3rd	rms	1994	Com-Tal	LASAG Nd:YAG KLS-126	Almost same as 2nd generation Matched Aérotech controls Minor improvements to make slightly more "production-friendly"
4th	rms/Cordis	1996	Com-Tal	LASAG Nd:YAG KLS-126	Same basic design as 2nd and 3rd generation Improved motion control resolution
4th "Plus"	Cordis	1997	Com-Tal	LASAG Nd:YAG FLS-342	Same as 4th generation Improved laser

D-163. As shown in this document, Cordis started its laser-cutting efforts in the very early 1990s with a company by the name of Symbiosis. Mackaronis dubbed this the "0th" generation system. Id. This system had "crude controls" and a "crude design" and ultimately was "pushed off into a corner" and "dismantled." Tr. 1709; D-163 at 4.

In 1992, Cordis contacted Fritz Muller at Lasag to investigate cutting stents with a Lasag laser and using the Tessier wet-process. P-144. Cordis hired LPL to put all the

pieces together and design what Mackaronis called the "1st" generation system. D-163 at 3–4. There is no evidence that this system ever cut commercial quantities of acceptable stents. To the contrary, "the execution [(of this system)] was less than optimal." Id. Notably, this Lasag inspired system did not attach the workpiece fixture to the laser cutting tool. Tr. 2141–42; P-144.

J&J subsequently hired RMS to work with LPL and develop what became the "2nd" generation system.² E.g., Tr. 2491, 2594; D-137; D-163 at 4. This system was "Swiss-style" and "matches up to" the drawing shown in Plaintiff's Trial Exhibit 156—the 1995 LPL machine. Tr. 1720; P-156. In this machine, the bushing was mounted to the subframe and was not carried on the laser cutting tool. Tr. 2308–09.

RMS next teamed with Comtal to upgrade this system and made the "3rd" generation system. D-163 at 4. Even with the upgrades, RMS kept the Swiss design where the workpiece fixture was not attached to the laser-cutting tool. Tr. 1721–22.

Still not satisfied, RMS upgraded the 3rd generation system to create a "4th" generation system having improved motion controls. D-163 at 4. This system, like the 2nd and 3rd generation systems, also did not have the workpiece fixture attached to the laser cutting tool. Tr. 1726.

Despite all of these development efforts, RMS "had difficulty in getting a consistent quality and production [of stents] off their equipment." Tr. 2498. Problems associated with the RMS machines included cracking, hole dimensioning issues, and

² Cordis originally asked RMS to consider the possibility of using the Symbiosis system. Tr. 2489–90. But there is no evidence that RMS ever used that system to laser-cut stents for Cordis.

notching. Tr. 2511. At least some of these problems were attributable to the laser-cutting step rather than any post-laser cutting processing steps. Tr. 2506–07. According to one witness, RMS's laser-cutting problems resulted in "probably one of the worst yield processes [Cordis] ha[d] ever seen in the way of a yield." Tr. 2506.

RMS and Cordis had numerous "round table discussions" in order "to determine how [they] could increase yields." Tr. 1734–35. But despite upgrading from 1st to 2nd to 3rd to 4th, etc. generation systems, nobody ever suggested that the location of the workpiece fixture holding the bushing could or should be changed. Id. Nobody at RMS or Cordis thought the location of the bushing would make any difference. Id.

ii. Copying of the Invention By Defendants

One of the most extensively disputed issues at trial was whether Norman Noble independently developed the claimed invention around the same time Gary Gustafson did or whether Norman Noble instead obtained the idea from Spectralytics when it visited Spectralytics in August of 1995. There was more than sufficient evidence for the jury to conclude the latter.³

The evidence at trial showed that when Spectralytics hired Gary Gustafson in early May of 1995, Gustafson's first project was to perfect a stent cutting process. P-182; Tr. 295–97. By May 31, Gustafson had developed a new stent cutting fixture, albeit not one according to the present invention. P-13; Tr. 301–02. During the month of June,

³ As discussed in Section III.C., infra, nothing precluded Spectralytics from asserting that Norman Noble copied Spectralytics' invention.

Gustafson continued trying to perfect the stent-cutting process and, by June 27, he and Oberg had a meeting to discuss making stents for SciMed. Tr. 303–04.

Then, in July 1995, two important things happened: Spectralytics hired a new employee, Russ Morris, and Spectralytics purchased a Lasag laser. Tr. 304–05; P-18; P-20. Morris was a tool maker. Tr. 305. In total, the Lasag laser with ancillary tooling cost approximately \$200,000. Tr. 306–07.

Both Oberg and Gustafson—who is still upset about being fired by Oberg and does not want to help Oberg in any way (Tr. 625)—agree that Spectralytics would never have both hired Morris and purchased the new laser equipment system if Gustafson had not already conceived of the '277 patented invention by that time. Tr. 306–08, 634–37. As Gustafson explained, "the primary job that both Russ and I had were to make this tool that ultimately became this patented idea or patented hardware." Tr. 634. "[T]he whole intent of hiring Russ and to buy this laser was to put into place or into work the idea that became the invention." Tr. 635. Gustafson testified unequivocally that Morris built the invention within three to four weeks after starting at Spectralytics, and certainly prior to August 24, 1995. Tr. 637, 766. Thus, there was more than sufficient evidence for the jury to conclude that the invention of the '277 patent existed prior to Norman Noble's visit in August of 1995.⁴

Larry and Scott Noble visited Spectralytics on August 24, 1995 for the specific purpose of learning about Spectralytics' stent-cutting technology. Tr. 325. Mr. Oberg

⁴ This conclusion is further supported by a subsequent drawing dated October 19, 1995 for a part that was only created to solve a problem that arose as a result of use of a prototype of the invention. Tr. 639–40; P-34.

testified that the meeting lasted for about three hours, that Spectralytics was a very small facility in 1995, and that he gave the Nobles a tour of the shop floor where they saw laser cutting systems. Tr. 319–26, 601–03. Oberg further testified that he believes there was a prototype of the Gustafson invention on the shop floor that day and that, regardless of whether they saw a prototype, there was no reason he would not have told the Nobles that Spectralytics was putting the work piece fixture on the laser head. Tr. 325–26, 328.

The fact that Norman Noble had access to the inventive idea—and particularly hanging the bushing off the laser head—and ultimately directed their employees to implement that precise idea in a nearly identical manner is enough to establish lack of independent invention and probable copying. See Iron Grip Barbell Co. v. USA Sports, Inc., 392 F.3d 1317, 1325 (Fed. Cir. 2004) ("copying," for purposes of the obviousness inquiry, can be established by showing access and substantial similarity); see also Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1541 (Fed. Cir. 1983) ("An alleged infringer's lauding of all the available prior art may, for example, in some cases have a hollow ring when played against its disregard of that art and its copying of the invention."). This inference is further supported by the inconsistent testimony from the Nobles regarding who supposedly came up with the idea there. Tr. 1193, 1436, 1454, 1775, 1813–14. As such, it was both reasonable and correct for the jury to reject Norman Noble's claim of independent development and conclude that Norman Noble's copying supported the non-obviousness of the claimed invention.

iii. Commercial Success

Incorporating the invention of the '277 patent gave Spectralytics immediate commercial success. Practically overnight, Spectralytics went from a company that could not cut any stents to specification (Tr. 629–30, 892)—and could only deliver three prototype stents per order of ten (Tr. 284–85)—to a company that sold approximately \$300,000 in stents to InStent and Unicath in 1996, almost \$600,000 in stents to InStent and Unicath in 1997, almost \$750,000 in stents to InStent and Unicath in 1998 (P-251; Tr. 891–95), and routinely sells approximately \$1 million per year in stents now. Tr. 370–71.

Norman Noble also achieved commercial success by adopting the inventive idea of carrying the bushing on the laser cutting tool (and incorporating the other elements recited in the patent). Norman Noble had never used a laser to cut anything prior to receiving its first laser in September of 1995. Tr. 1427–29. But by using that inventive idea—called the follower assembly—Norman Noble became Cordis's supplier, entered into a guaranteed multi-million-dollar-per-year contract, and sold approximately \$500 million in stents to Cordis in the past decade. Tr. 1233, 1520–21. Being Cordis's supplier was particularly lucrative because Cordis had the only approved stent in the United States through approximately 2002. Tr. 368.

Defendants argue that the evidence of commercial success by Spectralytics and Norman Noble must be rejected because of a lack of nexus between the success and the patented invention. Defendants' Brief 23–24. The verdict-adjusted evidence, however, shows otherwise. As discussed in the next section, the Defendants expressly touted the

advantages of the patented follower assembly over other systems. This fact is adequate to show "nexus" between the invention and the commercial success. Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579 (Fed. Cir. 1997). Moreover, Norman Noble admitted that it could not have sold any stents to Cordis, no matter how good their electropolishing and other processing steps were, if the stents were not cut well. Tr. 1212.

iv. Praise of the Invention

There was also evidence from which the jury could conclude that the claimed invention was praised by others. Cordis described Norman Noble as having "superior" or "advanced technology," which resulted in "cutting capabilities and precision not attainable" by the RMS systems. Tr. 2507, 2512–13. For example, Norman Noble was able to cut to "plus or minus one ten-thousandths of an inch," which neither RMS nor Cordis could do. Tr. 2512–13.

Norman Noble specifically touted and praised the infringing follower assembly as one reason why its systems were better than the RMS (or Comtal) systems. Noble stated that "Comtal's guide bushing is isolated from laser head and therefore, subject to moving off centerline of workpiece. Noble's guide bushing is part of laser head therefore stent is always on centerline of laser." P-119. When Cordis asked Norman Noble to consider using the RMS systems, Norman Noble was "very negative" about the RMS equipment and "didn't want it." Tr. 2514–15. Norman Noble believed its equipment was better (Tr. 2515) and specifically highlighted the follower assembly as a key distinction. P-119.

Defendants' own witness, Jeff Miller, testified that he thought the idea of carrying the workpiece fixture on the cutting tool was a "fantastic" idea. Tr. 1874–75. He testified that the idea was "fantastic" when it was first told to him (Tr. 1775–76, 1815, 1874–75) and remains "fantastic" today. Tr. 1776.

In summary, the verdict-adjusted evidence shows that there were significant differences between the claimed invention and the prior art, the claimed invention was contrary to accepted wisdom in the prior art, the invention led to tremendous commercial success, others failed to arrive at the invention despite a long-felt need, Norman Noble copied the invention, and that Defendants praised the invention. The jury instructions correctly told the jury that they "must" consider these factors in deciding obviousness. Docket No. 361 at 13 (Jury Instruction 14). Thus, Spectralytics offered substantial evidence in favor of the conclusion that Defendants failed to prove invalidity by clear and convincing evidence.

c. Defendants' Challenges Do Not Create Clear and Convincing Evidence of Obviousness

Defendants' Brief points primarily to two sets of evidence as establishing invalidity by clear and convincing evidence: (1) the testimony of Messrs. Muller, Press and Dunbar concerning the alleged earlier-in-time Muller Device and Dunbar device and (2) the snippets of Mr. Madsen's testimony that Defendants deem most favorable to their position. But the Muller, Press and Dunbar testimony was contradicted and impeached. Moreover, the Court may not second-guess the jury's apparent credibility determinations with respect to Messrs. Muller, Press and Dunbar and credit any of their testimony at all.

And Mr. Madsen's testimony, carefully examined and considered *in toto*, does not demand a finding of invalidity.

(1) The Jury Was Entitled to Reject the Testimony of Muller, Press and Dunbar Regarding Alleged Prior Development

At the core, Muller, Press and Dunbar merely provided oral testimony concerning what they believe happened more than a decade ago. It is well-settled that such oral testimony is not required to be accepted as clear and convincing evidence of invalidity. See Juicy Whip v. Orange Bang, 292 F.3d 728, 742–43 (Fed. Cir. 2002); In re Reuter, 651 F.2d 751, 759 (C.C.P.A. 1981) (testimony based on memory of events occurring more than 5 years earlier is not required to be accepted as clear and convincing evidence; citing additional cases). The jury was told to consider the witnesses' "memories" and that witnesses sometimes "forget things." Docket No. 361 at 3–4 (Jury Instruction 5). The jury was told "you may believe all of what a witness says, or only part of it, or none of it." Id. at 3. Hence, even if their testimony had not been contradicted and impeached, the jury would have been entitled to reject it. Juicy Whip, 292 F.3d at 742–43.

In fact, however, the testimony of Muller, Press and Dunbar was heavily contradicted and impeached. Mr. Muller claimed that he developed his alleged carried-on tooling more than a decade ago, before he started selling lasers to anybody. Tr. 2132–33. However, Muller also testified very memorably that: "We document what we do so we can go later back and see what we did." Tr. 2141. He said that Lasag kept all documentation in a lock box and that the files had been given to the parties in this lawsuit. Tr. 2121. But there was absolutely *zero* documentation indicating the existence

of the alleged Fritz Muller device prior the filing of the '277 patent application. The lack of any supporting documents contradicts and impeaches his memory about what might have been done more than a decade ago. Moreover, the documents that do exist flatly contradict his memory, including a 1992 drawing (P-144) that did not show any tooling carried on the lens assembly (Tr. 2141–42) and the 1994 patent (D-39) that lacked any tooling carried on the lens assembly. Tr. 2128.

This gaping lack of any documentation was lamented by Defendants' counsel during the cross examination of Madsen. Here is what counsel said when trying to impugn Madsen's refusal to accept Muller's testimony as clear and convincing evidence:

Q. Are you saying he [Muller] is lying?

A. I'm just saying I would like to see a document.

Q. *So would I.*

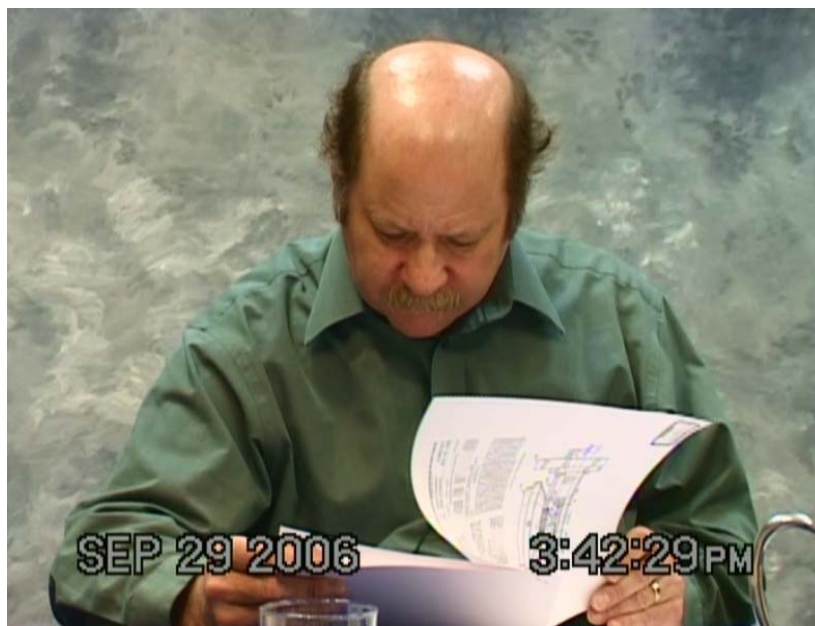
Tr. 2734 (emphasis added).

Regarding Press, Cordis points to Press's testimony stating that Lasag gave LPL permission to duplicate the Lasag (Muller) design and that they built some machines. However, Press's testimony about what LPL actually made is confusing at best, and, if anything, it establishes that the Muller device did not use the '277 patented invention.

First, Press was testifying from memory and did not even know when the machine he recalled was made, i.e. whether in 93, 94 or 95. Tr. 2307–08. Second, he could point to *zero* documents supporting any use of the Muller device. Tr. 2311. Third, he testified that he abandoned whatever it was that he made because it was "not well suited for the

task." Tr. 2310–11. It is not likely that he used the invention if he found it to be unsuitable.

Fourth, Press's testimony established that the Muller device was *not* "carried on" the laser cutting tool as that term was construed by the Court. His testimony shows that whenever he said two items were "directly connected," that was a matter of definition, and in his view two items that were separately attached to the same base were directly connected (such as the 1995 LPL machines). Tr. 2308–09. Therefore, Mr. Press was shown the patent in suit, which depicts the laser cutting tool supporting the weight of the workpiece fixture, and was asked: "Before October 24, 1996, had LPL made any stent laser cutting devices in which the laser cutter was directly connected to the workpiece fixture?" Tr. 2310. Here is a still frame of Press looking at the '277 patent when answering this question.



He said, "I can't honestly remember if we've done anything like this (indicating)." Id.

Thus, Press never testified that the Muller device, which LPL supposedly made, was carried on the cutting tool, and a reasonable jury could conclude that LPL never made the patented invention prior to the '277 patent application being filed because Press specifically so testified.

Defendants' drawings supposedly depicting Press's testimony (Defendants' Brief 10–11), were presented for the first time in Defendants' motion papers. Press did not make these drawings or testify about these drawings. Defendants did not show those drawings to the Court or jury during trial. And there are no contemporaneous drawings in evidence that even remotely resemble such drawings. These after-the-fact drawings created by Defendants' counsel are pure lawyer speculation about Press's testimony. They are not evidence of anything—and certainly cannot establish by clear and convincing evidence that Mr. Press built the Muller device and attached it to the laser head prior to 1996.⁵

As for Dunbar, he admitted that his memory was "shaky" about the structure of the machine he made and that he wasn't sure whether the bushing was attached to the laser or to the Z-axis (a vertical stage that moves parts up and down in the machine). Tr. 1915, 1961–62. Any doubt about what he made was resolved, however, by the laser

⁵ Defendants' drawings are also inconsistent with Muller's testimony that he used a bushing on the side of the laser beam, not underneath it. Muller was adamant that he supported the tube on both sides of the beam—e.g., in a non-cantilever manner. Tr. 2135; see also Tr. 2130–31. He further testified that he placed his bushing so that it was on one side of the laser beam and the rotary was on the other side of the laser beam so that the tubing was not held in a cantilever fashion. Tr. 2127, 2133. He never testified that he had the bushing extend under the laser beam, as shown in Defendants' newly-created drawings.

development timeline he prepared in October 1995, which clearly stated that the laser and bushing was separately attached to the Z-axis. Tr. 1959–61, 1974; D-122. Dunbar testified that this timeline was prepared close to the time of the events that it reported, that he wanted it to be accurate when it was prepared, and that the timeline is a more accurate record of what he did than his own unaided memory. Tr. 1953–54. In view of this testimony, a reasonable jury could easily conclude that the Dunbar device had the bushing attached to the Z-axis, as the timeline shows, not the laser cutting tool.

Dunbar's testimony was also contradicted by the testimony of Dunbar's former boss, Bruce Cerepak. Tr. 2820. Cerepak was with RMS until September 1994 (*id.*), the time-period during which Dunbar supposedly attached the bushing to the laser cutting tool and ascertained significant problems with that design. D-122. But when shown a drawing that Defendants contend shows the bushing attached to the laser cutting tool (D-83), Cerepak was adamant that he "ha[d] never seen a machine like this." Tr. 2820. He further testified that did not remember Dunbar ever "go[ing] up for support of the bushing." Tr. 2825. This further supports the reasonable inference that Dunbar never developed a system having a bushing carried on the laser cutting tool.

Finally, Cordis argues that Bill Dobbins testified that there were only three places to attach the workpiece fixture and that one place was the laser head. Defendants' Brief 9. However, Dobbins made abundantly clear that he never attached the bushing exclusively to the laser head and that he always had the bushing mounted down to the table. Tr. 2296–98. He said that even when he decided to attach the bushing to the laser head, he kept the bushing mounted to the table so that it was not carried on the laser

cutting tool. Tr. 2261–63. Thus, contrary to Defendants' assertion, Dobbins' testimony actually shows that the claimed invention was *not* obvious to Dobbins.

(2) Madsen Did Not Admit That the Invention Would Have Been Obvious At the Time the Invention Was Made

Defendants argue that on cross-examination, Madsen admitted the obviousness of claim 1 of the '277 patent. Defendants' Brief 3. No such admission was made.

On direct examination Madsen addressed every piece of prior art relied on by Defendants, applied the correct legal standard to the facts, and testified that the patent would not have been obvious at the time the invention was made. Tr. 2564, 2582. He said that his analysis was influenced by Huber's testimony that the Swiss prior art addressed vibrations in a completely different way from the '277 patent and taught away from the patent. Tr. 2565, 2587–88.

Even in the cross-examination testimony relied on by Defendants, Mr. Madsen unequivocally stated that it would not have been obvious to attach the workpiece fixture to the laser. Tr. 2730. In asserting otherwise, Defendants rely on snippets of testimony during which: (1) Defendants' counsel *instructed* Madsen to assume that vibrations were not a concern to Gustafson, even though Madsen disagreed with that;⁶ (2) Defendants' counsel *instructed* Madsen to assume that the only problem Gustafson was trying to solve was to have a fixed spatial relationship between the laser and the workpiece fixture,

⁶ Huber confirmed Madsen's testimony that the '277 patent is, in fact, concerned with vibrations. Tr. 2100. Moreover, several witnesses testified that vibration is generally a concern whenever one is trying to create a system that will accurately cut stents. See Tr. 2243–44, 2130–31, 2149, 2151.

even though Madsen disagreed with that; and (3) Madsen stated that he was being forced to use *hindsight* in order to answer counsel's hypothetical questions. Tr. 2726–45.⁷

On redirect examination, Madsen testified that the patent specification explained that the carried on feature addressed the problem of "inadvertent movement," that this was just another way of referring to vibrations, and that when one took into account the issue of vibrations the '277 patent would not have been obvious to a person of ordinary skill in the art at the time of the invention. Tr. 2808–10.

Thus, Madsen never testified that the '277 patent would have been obvious to a person of ordinary skill at the time of the invention. Moreover, Defendants are incorrect in suggesting, to Madsen and to the Court, that in analyzing obviousness he must ignore the very problem that the invention was designed to address. In fact, the Court instructed the jury that in determining obviousness, they should consider both "the nature of the problem solved by the claimed invention" and evidence that "the prior art 'teaches away' from—that is, discourages—combining certain known elements." Docket No. 361 at 12 (Jury Instruction 12). Madsen testified that when these factors are taken into account, his opinion, as a person of ordinary skill in the art, was that the '277 patent would not have been obvious.

⁷ For example, Cordis relies on the testimony at Tr. 2733 as an admission that attaching to the laser would have been obvious. In his answer, Madsen said that was true if your only goal was to attain a fixed spatial relationship and the question itself references "what you have told us" which is that Mr. Madsen is basing his answers to the hypothetical question on "hindsight" based on the "picture" (demonstrative) used by counsel. Tr. 2729; see also Tr. 2731.

Madsen's testimony must be taken in its entire context, rather than relying on "a highlight reel of testimonial sound bites . . . in an effort to make the jury's verdict seem unreasonable," just like the unsuccessful movant in Rothman, 2009 U.S. App. LEXIS 2829, at *9.

d. The Evidence is Even Stronger in Favor of Plaintiff Now Than When the Court Denied Defendants' Motion for Summary Judgment

In denying the parties' cross motions for summary judgment on the issue of obviousness, the Court identified a number of facts and issues of fact that precluded the grant of summary judgment to either party:

- (1) the testimony by Defendants' Swiss machine expert, Mr. Huber, that the patented invention was "less effective in minimizing vibration-related problems," "less rigid," and "contrary to the accepted teachings of" Swiss-style machines;
- (2) whether Noble's device actually infringed and, if so, whether such device was a reason for Noble's commercial success;
- (3) whether Cordis's multiple-year development efforts demonstrated a long-felt but unsolved need or, relatedly, a failure by others to solve a problem;
- (4) evidence that RMS engineers had considered modifying their laser system to resemble a Swiss-style machine; and
- (5) whether Sato qualified as prior art.

Docket No. 151 at 45–48. The Court ultimately denied the cross-motions for summary judgment because the various issues of fact "makes it difficult to determine, on motion for summary judgment, whether the approach of the '277 patent—attaching a workpiece fixture directly to a laser-cutting head and supporting the tubing being cut in a cantilever fashion—would have been obvious to a person of skill in the art." Id. at 48.

In light of the verdict, the Court must accept all of these factual issues as having been resolved in favor of validity. Thus:

- Huber again acknowledged that, in his view, the patented invention was less effective in minimizing vibration-related problems, less rigid, and contrary to the accepted teachings of Swiss-style machines. Tr. 2100–05.
- Noble's follower assembly does, in fact, infringe the patent. Docket No. 368 at 1.
- Noble's commercial success was due to its use of the follower assembly (Noble highlighted this feature as a reason for its success (P-119)), as well as admitted that, regardless of all its other supposed capabilities, it could never have sold a stent to Cordis unless it had been cut correctly. Tr. 1212.
- Developing an acceptable laser-cutting system "was more complicated than everybody thought" (Tr. 2495–96; see also Tr. 1731) and Cordis was dissatisfied with all of the systems prior to Noble's infringing system. Tr. 2505–06; D-163 at 4.
- The 1995 LPL machine represents precisely what one would expect from a combination of Swiss machines with lasers: a machine having the workpiece fixture mounted down on the table as originally drawn by RMS (D-276) and as implemented. P-156.
- Sato is not prior art and, regardless, did not have a workpiece fixture carried on the cutting tool as recited in the patent. Tr. 2634–35.

Thus, all of the factual issues that caused the Court to send this case to the jury in the first place have now been resolved in Spectralytics' favor. In addition, as discussed above, there are numerous other factual issues, such as copying, commercial success, etc., that also must be resolved in Spectralytics' favor. As such, the case is actually much stronger now than when the Court denied summary judgment. Accordingly, Defendants motion for JMOL must be denied.

D. Defendants Are Not Entitled to JMOL on the Issue of Willfulness

1. Defendants' Motion is Barred By Their Failure to Move for Directed Verdict on the Issue

Defendants did not bring a motion for a directed verdict on the issue of willful infringement at the close of all evidence and are therefore barred from moving for JMOL on the issue. "A party may not challenge a verdict in a post-trial motion for judgment as a matter of law absent a properly made motion for a directed verdict at the close of all the evidence." Hoescht Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1581–82 (Fed. Cir. 1996) (citations omitted); see also Conseco Finance Servicing Corp. v. N. Am. Mortgage Co., 381 F.3d 811, 821 (8th Cir. 2004); Zachar v. Lee, 363 F.3d 70, 73–74 (1st Cir. 2004).

"A post-trial motion for judgment can be granted only on grounds advanced in the pre-verdict motion . . . Adherence to the rule is mandatory." Canny v. Dr. Pepper/Seven-Up Bottling Group, Inc., 439 F.3d 894, 901 (8th Cir. 2006) (internal quotation marks and citations omitted.) A party who fails to move for JMOL at the close of all the evidence is precluded from moving for JMOL after the verdict. Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co., 308 F.3d 1167, 1187 (Fed. Cir. 2002) (reversing JMOL of enablement). The policy behind this rule is that "[a]rticulation of the grounds for judgment as a matter of law affords the nonmoving party the opportunity to cure the defects which may preclude the jury from considering his case." Canny, 439 F.3d at 901.

At the close of all the evidence, Defendants did move for a directed verdict on the issues of patent infringement and validity. But they did not argue that they could not be

liable for willful infringement if the underlying issues of infringement and validity were resolved in Spectralytics' favor. Defendants have therefore waived the right to seek judgment as a matter of law that they are not liable as willful infringers now. See id.; Hoechst, 78 F.3d at 1581–82.

2. The Verdict of Willful Infringement Was Supported by Clear and Convincing Evidence

The Court instructed the jury that to establish willful infringement, Spectralytics needed to prove four things by clear and convincing evidence. Docket No. 361 at 15 (Jury Instruction 15). The evidence at trial was sufficient to prove that Defendants willfully infringed under this standard.

a. High Likelihood of Infringement

The court instructed the jury that whether there was a high likelihood of infringement is established objectively without regard to the Defendants' state of mind. The evidence at trial established that there was a very high likelihood of infringement. See Section I.B., supra. Neither Defendant presented any plausible theory under which a reasonable jury could find that they did not infringe. Rather, they relied almost completely on attorney arguments and esoteric theories that were unsupported by any documents or the testimony of an expert. The jury reasonably concluded that there was a high likelihood of infringement.

b. High Likelihood of Patent Validity

The jury was also instructed that they must determine whether there was a high likelihood of patent validity objectively. As with Defendants' infringement case, the jury

could have reasonably concluded based on the evidence, as measured against the jury instructions, that there was always a high likelihood that the '277 patent was valid. The two key factors in assessing Defendants' obviousness case were that the Swiss prior art relied on by Defendants taught away from the invention and that no piece of prior art taught the carried on feature of the invention. Taken in conjunction with the substantial evidence of commercial success, copying, and repeated failures by Defendants, this evidence supports a finding of validity by clear and convincing evidence. See Section I.C., supra.

c. Defendant's Awareness of the Patent

The evidence at trial established beyond doubt that Cordis and Norman Noble were both aware of the '277 patent long before they were sued, and that they nevertheless continued to infringe. Cordis admitted in its interrogatory answers that it learned of the patent in December 1998 when it was identified in a Patent Summary Report that was distributed within Cordis. Tr. 1168–70; P-142. Three years later, Cordis praised the '277 patent in one of its own stent-related patents that was issued to an inventor named Mitelberg. See Tr. 1171–72; P-76 at col.2 ll.6–14.

Norman Noble also admitted in its interrogatory answers that it was aware of the '277 patent two years before it was sued by Spectralytics. Tr. 1172. The interrogatory answer explained that in August 2004, within days of when Spectralytics notified Cordis of its infringement charge, Cordis sent Norman Noble a copy of that letter, which included a copy of the patent. Id.; P-77.

d. Defendants Knowledge of Infringement and Validity

The jury reasonably could have concluded that Defendants knew or should have known they were infringing the patent and that it was valid by July 2004, when Spectralytics' counsel wrote to Cordis and explained that he suspected Cordis was using the invention of the '277 patent and offered Cordis a license. In that letter, which Cordis informed Norman Noble of almost immediately (Tr. 1172), Spectralytics summarized the core facts that Spectralytics later proved at trial: that Spectralytics had seen a video on the PBS News Hour that showed Cordis's laser cutting machine; that the Cordis machine resembled the machine covered by the '277 patent; and that Spectralytics suspected that Noble may have learned of the patented design when it visited Spectralytics in the mid-1990s. P-77 at 2–3.

Cordis's in-house lawyer Paul Coletti did not respond to this letter for three months. P-78; P-79. In his responsive letter, Coletti did not deny infringement but rather suggested that the patent was invalid based on prior art that taught the invention. Specifically, Coletti said that "it is apparent to us that no matter the scope of the Gustafson claims, they cannot possibly cover methods or apparatuses which were in the public domain from a time well prior to the priority date of Gustafson." P-79 at 2.

The jury could have reasonably concluded this statement was reckless, untrue, and made in bad faith. As Coletti and Cordis knew or should have known, there was no prior art machine that was covered by the '277 patent. The closest prior art was the 1995 LPL machine, which clearly was not covered by the '277 patent. During the year long discussions between the parties that followed, Cordis never denied infringement or

produced any prior art that substantiated the invalidity claim in Coletti's letter. At trial Defendants did not prove that anybody used a device covered by the '277 patent, as Coletti suggested in his letter.

As to Norman Noble, Scott Noble testified that he received the July 2004 letter from Spectralytics but did not even read the patent. Tr. 1209–10. No witness from Norman Noble testified that it had conducted a reasonable investigation into the infringement charge. Rather, the evidence established that Norman Noble continued to use the infringing follower assembly until at least a few months before trial. Tr. 1803–05, 1875–78.⁸

Defendants did not bring any witnesses to trial to testify about their alleged good faith belief that the '277 patent was invalid or not infringed. Cordis did not produce Coletti or any other witness to testify about their good faith, and Noble, likewise, did not bring Scott Noble or Larry Noble to trial to explain why the company continued to infringe after receiving the July 2004 letter. Although silence alone is not an admission, where facts like those here strongly indicated willfulness, the jury could have reasonably inferred that certain witnesses did not testify because their testimony would have hurt the Defendants.

E. Defendants are Not Entitled to JMOL on the Issue of Damages

The following statement by the Federal Circuit well summarizes why Defendants' motion for JMOL should be denied in this case:

⁸ While not presented as evidence to the jury, Norman Noble's counsel admitted at sidebar that it continues to use the infringing design even today. Tr. 1877.

This case is a classic example of competing experts. Each side had the opportunity to present its damages theory. Each party's expert supported his reasonable royalty determination with an analysis of relevant factors based on his client's view of the disputed facts. The outcome of the case depended to a large extent upon which predicate facts the jury believed, and then on which expert's analysis they believed . . . The Defendants may not like the jury verdict, but it was the result of a fair trial, fairly fought.

Micro Chem., Inc. v. Lextron, Inc., 317 F.3d 1387, 1394 (Fed. Cir. 2003). There is no basis in this case to disturb the jury's award of damages.

1. Legal Standard

In patent cases, once a patent is found to be valid and infringed, the patentee is entitled to "damages adequate to compensate for the infringement." 35 U.S.C. § 284. The amount awarded shall be "in no event less than a reasonable royalty." Id. The purpose of this language is "expansive rather than limiting" and is intended "to set a floor below which damage awards may not fall." Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1544 (Fed. Cir. 1995) (en banc).

As the Eighth Circuit has recognized, "fixing damages is peculiarly a jury function." Wright v. Hoover, 329 F.2d 72, 76 (8th Cir. 1964); see also Dairy Farmers of Am., Inc. v. Travelers Ins. Co., 391 F.3d 936, 945 (8th Cir. 2004) (citing Wright).

"Although damages may not be based on speculation, they need not be proved with unerring precision either." Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1579 (Fed. Cir. 1992) (citation omitted). Moreover, "the defendant whose wrongful act gave rise to the injury will not be heard to complain that the amount thereof cannot be determined with mathematical precision." Celeritas

Tech., Ltd. v. Rockwell Int'l Corp., 150 F.3d 1354, 1360 (Fed. Cir. 1998) (citation omitted). "Any doubts regarding the calculatory precision of the damage amount must be resolved against the infringer." Kaufman Co., Inc. v. Lantech, Inc., 926 F.2d 1136, 1141 (Fed. Cir. 1991).

2. The Jury Was Permitted to Award Damages on the Basis of a Running Royalty for the Use of the Patented Invention

Defendants' primary attack on the jury's damages award is its assertion that damages cannot be based on an ongoing royalty for use of the patented invention because there was no evidence of an industry practice of running-royalty licenses. Defendants' Brief 45–48. Defendants' argument is flawed both legally and factually.

a. There is No Legal Requirement for Evidence of Industry Practice

As a legal matter, there is no "rule" that an industry practice of use-based licenses is a necessary prerequisite to an award of damages based on ongoing use of the invention. Defendants wrongly claim that Stickle v. Heublein, Inc., 716 F.2d 1550 (Fed. Cir. 1983), set forth such a rule. No such rule is contained in Stickle. Rather, Stickle merely held that, *under the particular facts of that case*, one of which happened to be the absence of evidence of an industry practice, the award of a royalty based on use of the invention could not be upheld in that case. Id. at 1561–63.

Stickle is easily distinguished because in that case, the patentee's business was making and selling the patented product. Stickle at 1553–54. In the present case, in

contrast, Spectralytics is not in the business of selling stent-making machines. Tr. 378.⁹ Spectralytics is in the business of selling stents. Tr. 244–46. Spectralytics has never sold or licensed the patented machine to Norman Noble or any other competitor in the stent market. Tr. 378–81. And, as explained in further detail below, it would make absolutely no financial sense for Spectralytics to sell a patented machine or provide a paid-up royalty to a competitor such as Norman Noble.

The facts of the present case are much closer to those of Minco, Inc. v. Combustion Eng'g, Inc., 95 F.3d 1109 (Fed. Cir. 1996). In Minco, the patent owner had a patent on a furnace for fusing minerals, such as silica. Id. at 1112. The patent owner used its own furnace to fuse silica for re-sale. Id. at 1113. Defendant was a competitor, who built its own, infringing, furnace and sold its own fused silica. Id. at 1113–14. In affirming the district court's decision to award a royalty based on the sale of fused silica, the Federal Circuit stated:

In this case, the invention produced marketable fused minerals. Both [Defendant] and [the patent owner] used the

⁹ Defendants attempt to dispute this by pointing to transactions involving St. Jude Medical and Cook Incorporated. Defendants' Brief 48. Gary Oberg testified, however, that Spectralytics sold three machines to St. Jude only because of an unexpected loss of business that created excess capacity, and not for the purpose of making stents. Tr. 379–81. Oberg further testified that St. Jude agreed to sell the machines back to Spectralytics if they did not need them anymore and that Spectralytics did, in fact, purchase two of machines back. Tr. 381–82. This testimony must be accepted as true. Regarding Cook, there was never any agreement to sell machines to Cook, and Spectralytics never sold machines to Cook. Rather, Spectralytics merely agreed to a liquidated damages clause stating that, in the event it defaulted on its obligations to sell stents to Cook, it would be required to turn the machines over to Cook. Tr. 1331–32. In the meantime, Spectralytics owned the machines and profited from the use of those machines by selling stents to Cook. Id. Thus, this testimony actually confirms that Spectralytics was in the business of selling stents, not machines.

invention to compete in that market. Therefore, [Defendant] should have reasonably foreseen that infringement of the '462 patent would harm [the patent owner's] sales in the fused silica market. This court accordingly upholds the trial court's determination to use that measure of damages.

Id. at 1118.

Similar to Minco, the invention in the present case is used to produce marketable stents. Both Spectralytics and Norman Noble use the invention to compete in that market. Therefore, Norman Noble should have reasonably foreseen that infringement of the patent would harm Spectralytics' sales in the stent market, and determining damages using Norman Noble's sales as a baseline is appropriate. Id.; see also Micro Chem., 317 F.3d at 1390–94 (affirming a use-based royalty on a patent for a system that was infringed by a direct competitor).

Neither Minco nor Micro Chem. required evidence of an industry practice of granting use-based licenses in order to affirm an award of use-based damages. This, by itself, destroys Defendants argument that Stickle set forth a hard-and-fast-rule. Moreover, the fact that Spectralytics is not in the business of selling stent-making equipment, but rather competes with Norman Noble in the business of selling stents, makes this case much more like Minco and Micro Chem., and much less like Stickle or any of the other cases relied on by Defendants.

As the Court correctly instructed the jury, other license agreements in the industry is simply one of the many factors that a jury is to consider in setting a reasonable royalty. Docket No. 361 at 17 (Jury Instruction 17). Defendants did not ask for an instruction that

this one factor is dispositive and overrides all of the others, and for good reason—such an instruction would have been contrary to the law.

b. Spectralytics Presented Evidence of Use-Based Royalties in the Industry

Defendant's argument is also factually flawed because Spectralytics did present evidence at trial of ongoing use-based royalties in the industry. Spectralytics' damages expert, Julie Davis, testified that she has seen hundreds of licenses involving medical devices. Tr. 1228. She further testified on direct examination as follows:

Q. Are you aware of licenses in this industry where there is a machine to manufacture products and the royalty is based upon the products made on the machine?

A. *Yes, I have seen such licenses.*

Tr. 1253 (emphasis added). This testimony regarding other "licenses" (plural) in the industry must be accepted as true.

On cross-examination, Defendants did not ask Ms. Davis about these licenses. Instead, she was asked a *different* question: whether she was aware of any instances where somebody was required to pay royalties for both *buying* a machine and for *using* that machine. Tr. 1326-27. In response to that question, Davis identified the Corvita license.¹⁰ Defendants argue that the Corvita license should be disregarded because it involved method patents, not machine patents. Defendants' Brief 47. However, it is not unusual for patents on a machine and on a method of using that machine to be treated the

¹⁰ Because it was a different question, there is no way to tell from the record whether the license Ms. Davis identified in response to Defendants' questioning was one of the licenses that she referred to on direct examination.

same for licensing purposes. See Stickle, 716 F.2d at 1561 n.8 (noting that "the parties treated the mechanical and process patents as a unitary licensing property"). That being the case, the Corvita license is probative of industry practice relating to use-based licenses for machine patents.

There is also evidence in the record relating to use-based royalties for machine patents involving Hutchinson Technologies and IBM. Tr. 999, 1244. Defendants undoubtedly will argue in reply that these licenses are too far outside the medical device industry to be relevant in this case. It is important to note, however, that the testimony regarding Hutchinson was entirely elicited by the Defendants. Tr. 999. If Hutchinson's licensing practice is irrelevant, then why did Defendants ask about it? Having chosen to ask about Hutchinson's licenses, Defendants cannot simply dismiss the answer as irrelevant when it turns out not to favor their case.

Finally, it is important to note that Defendants presented no evidence of the opposite proposition—that it is standard in the medical device industry for patentees to grant paid-up licenses for patents on machines. Instead, all of the evidence cited by Defendants relates to the situation where one of the parties to the transaction is in the business of selling machines. See Defendants' Brief 47 (citing Tr. 546, 999, 1329, 1332). The issue here is not whether a company who is in the business of selling machines would charge a use-based royalty in addition to the purchase price of the machine. Spectralytics does not sell machines. Rather, the issue is what would a patentee charge *a competitor* for the right to use intellectual property required to use a machine. Defendants' expert could not name a single instance in the industry involving a paid-up

license to use a machine that did not involve sale of a machine, much less one involving a license between competitors. Tr. 2432.

Thus, while Spectralytics was not required to present evidence of an industry practice of ongoing use-based royalties for machine patents, there is more than substantial evidence from which the jury could have found that such a practice existed.

c. Substantial Evidence Supports the Jury's Use-Based Damages Award

In addition to the industry practice evidence described above, there is substantial other evidence supporting a use-based royalty for Spectralytics' invention. In fact, when viewed in the light most favorable to the verdict (which Defendants steadfastly refuse to do), the evidence indicates that such a use-based royalty is the *only way* to fully and fairly compensate Spectralytics for Defendants' nearly 10 years of patent infringement.

(1) The Hypothetical Negotiation

The evidence shows that, in 1995, Spectralytics and Norman Noble were very similar. Both companies were job shops with customers in the medical products industry. Tr. 244–45, 1410. Both had about \$5 million in annual sales. Tr. 1488. Both knew that there was great potential for a huge increase in sales and profits if they could become a supplier of stents to Cordis. Tr. 1200. Both hired Jack Lundeen for the specific purpose of helping them get in with Cordis. Tr. 288–89, 1493–94.

By the time the '277 patent issued in 1998, Norman Noble had succeeded in establishing itself as a stent supplier for Cordis and was well on its way to becoming the \$80–90 million per year company (in stent sales alone) it was from 2002–2005. P-89.

Spectrallytics also was in the business of manufacturing and selling stents in the medical products industry, though not on the scale that Norman Noble achieved by its infringement. Tr. 903. As previously discussed, Spectrallytics was *not* in the business of selling stent-cutting machines. Tr. 378.

Against this backdrop, why would Spectrallytics ever agree to license the '277 patent to a *competitor* for a one-time pittance, as Defendants suggest? As Davis testified:

[T]o the extent that the two parties who are negotiating the agreement are competitors, the party that owns the patented technology understands that if he provides the other party permission to use it, he's setting up a competitor. He's giving the competitor the opportunity to make sales that will probably take money out of the pocket of the owner of the patent.

Tr. 1239. The '277 patent represented Spectrallytics' one realistic chance of asserting the leverage that it would need to displace Norman Noble and obtain some or all of the huge profits that Norman Noble was making. There is simply no way in these circumstances that Spectrallytics would agree to a license without receiving a "piece of the action," i.e., a portion of the revenues that Norman Noble was reaping and would continue to reap using Spectrallytics' patented invention. *Id.*; see also Tr. 379, 1253. In their brief, Defendants refuse to even acknowledge Spectrallytics' side of the hypothetical negotiation analysis or explain why Spectrallytics would be willing to license the '277 patent to Noble for anything less than a substantial running royalty.

Moreover, looking at Norman Noble's side of the hypothetical negotiation, Davis testified that it would be in Norman Noble's best interest to agree to a running royalty, rather than a lump sum. Tr. 1251–52. A lump sum royalty forces Norman Noble to pay

for Spectralytics' invention regardless of whether they use it and regardless of whether they make any money with it. A use-based royalty means that Defendants only pay for the invention only to the extent they use the invention.

Normal Noble's claim that it never would have agreed to a running royalty for the '277 patent is also flatly contradicted by the Lundeen agreement. Normal Noble agreed to pay Jack Lundeen an ongoing commission on stent sales simply for introducing Normal Noble to Cordis executives. Tr. 1492–93. Normal Noble did so even though, at the time, it already had a relationship with Cordis. Tr. 2358. As Spectralytics' expert Davis confirmed, the fact that Normal Noble was willing to pay a running royalty to Lundeen for doing nothing more than introducing it to a customer it already had a relationship with supports the conclusion that Normal Noble would have been willing to pay a running royalty to Spectralytics for use of the '277 patent. Tr. 1253, 1335.

(2) Other Georgia-Pacific Factors

The jury instructions in this case provided a non-exhaustive list of eleven factors that the jury could consider in determining a reasonable royalty. Docket No. 361 at 17 (Jury Instruction 17). Spectralytics' expert Julie Davis went carefully through those factors and explained why they favored a substantial ongoing royalty-based award. Tr. 1235–47. For example, there is evidence that, among other things, (1) Spectralytics has never licensed a competitor under its patents to make stents (Factor 2), (2) Spectralytics and Norman Noble are head-to-head competitors (Factor 3), (3) the advantages of the invention over other existing, inferior technologies (Factor 6); (4) the fact that the patented invention has contributed to almost \$500 Million in sales for Norman Noble

over the past decade (Factor 8). Id. Davis has substantial experience managing patent portfolios and has seen hundreds of licenses in the medical products industry. Tr. 1219–20, 1228. Her ultimate opinion regarding the proper measure of damages is, itself, evidence that supports the jury verdict (Factor 11). Based on all of the evidence, it was not unreasonable for the jury to conclude that damages based on an ongoing royalty were appropriate. See Micro Chem., 317 F.3d at 1394; see also Minco, 95 F.3d at 1118.

One factor that merits further discussion is the issue of the availability and acceptability of alternatives to the technology covered by the '277 patent. Defendants argue that Norman Noble could have easily switched to a non-infringing design rather than use Spectralytics' patents. Defendants' Brief 53–55. Even if this were undisputedly true, the Federal Circuit has flatly rejected the notion that reasonable royalty damages are limited by the cost of switching to a non-infringing alternative. Mars, Inc. v. Coin Acceptors, Inc., 527 F.3d 1359, 1373 (Fed. Cir. 2008). Moreover, the issue of what alternatives were both acceptable and available in 1998 was heavily disputed at trial. Both Madsen and Davis testified unequivocally that the alternatives that were actually available in 1998 were not acceptable. Tr. 961–66, 1242.

In arguing otherwise, Defendants point to two designs—the so-called "modified Comtal design" and Norman Noble's 2008 re-design where it moved the bushing bracket to the Z-axis. The jury was not, however, required to accept their testimony that these products were both available and acceptable in 1998. As the Federal Circuit has held, "[w]hen an alleged alternative is not on the market during the accounting period, [the fact finder] may reasonably infer that it was not available as a non-infringing substitute at that

time." Grain Processing Corp. v. Am. Maize-Prods. Co., 185 F.3d 1341, 1353 (Fed. Cir. 1999). For this reason, it is the *Defendants'* burden to prove that an alternative was both available and acceptable. Id. at 1353–55; see also Fiskars, Inc. v. Hunt Mfg. Co., 279 F.3d 1378, 1382 (Fed. Cir. 2002).

A reasonable jury easily could have concluded that Defendants failed to carry their burden. The evidence shows that Norman Noble flatly rejected the use of the original Comtal machines because they did not function acceptably. Tr. 1525–28; P-119. There is no testimony suggesting that the 1998 modifications to the Comtal machine changed Noble's opinion of the machines. Moreover, the only witness to testify about the alleged existence of the modified Comtal machines (Dobbins) admitted that the machines were scrapped only about a year after they were introduced. Tr. 2283–84. Dobbins also admitted that the machines were never qualified for use in making stainless steel stents (the type made by Norman Noble), and that modifications would be needed to make the machines work on stainless steel. Tr. 2284, 2292–93, 2295.

Norman Noble's actions at the time it finally decided to reduce its use of Spectralytics' invention in 2004 speak volumes about the acceptability of both the modified Comtal machine and of Noble's 2008 modification. If those alternatives were so acceptable, one would expect Normal Noble to quickly switch over to them. Instead, Noble spent two years and millions of dollars switching over to Vasculathe machines. Tr. 1534, 1536, 1875–76. The jury was entitled to infer that Normal Noble never went to the alternative designs because they were not, in fact, acceptable alternatives. Grain Processing, 185 F.3d at 1353–55.

3. The Jury Was Permitted to Adopt a Royalty Rate That Was Between That Proposed By Spectralytics and the Defendants

Defendants argue that the royalty rate chosen by the jury—5%—was not supported by the evidence because it was based solely on the commission percentage contained in the Lundeen agreement. Defendants' Brief 50–52. Defendants' argument is flawed for at least two reasons.

One, there is no reason why the jury could not take the Lundeen agreement into account in ascertaining a reasonable royalty in this case. The fact is that Norman Noble was willing to pay Jack Lundeen a 5% running royalty for doing nothing more than introducing Noble to the Cordis executives. As Spectralytics' counsel correctly argued during closing arguments, this is a relevant data point to take into account in determining what a reasonable royalty would be for patented technology that, like Lundeen's introduction, would help Norman Noble get and maintain revenue from a large customer. As this Court correctly instructed the jury, the Georgia Pacific factors are "not every possible factor," but is merely a partial list of "the kinds of things to consider in setting a reasonable royalty." Docket No. 361 at 17 (Jury Instruction 17). Defendants have pointed to no case law suggesting that such a sales commission agreement cannot be taken into account in determining reasonable royalties.

Defendants falsely claim that "both sides' damages experts agreed that Lundeen's commission was irrelevant to computing a reasonable royalty." Defendants' Brief 50. When asked to agree that "[Lundeen's] commission is no indication of the value of the '277 patent, right?", Spectralytics' damages expert, Ms. Davis, testified "No." Tr. 1335;

see also Tr. 1253. Of course, Ms. Davis ultimately concluded that the '277 patent was actually much more valuable than what Lundeen provided to Norman Noble, as reflected by her conclusion that a reasonable royalty for the '277 patent was 20%, i.e., four times more valuable than what Lundeen received for introducing Norman Noble to Cordis.

Which leads to the second flaw in Defendants' argument: there is no requirement that the particular royalty rate selected by the jury be *directly* supported by any evidence. According to the Federal Circuit, the fact finder is "not restricted from choosing a figure other than that advocated by either party and may substitute an intermediate figure as a matter of judgment from all the evidence." Minnesota Mining, 976 F.2d at 1579 (citation omitted). A jury's choice "simply must be within the range encompassed by the record as a whole." Fuji Photo Film Co., Ltd. v. Jazz Photo Corp., 394 F.3d 1368, 1378 (Fed. Cir. 2005) (quoting Unisplay, S.A. v. Am. Elec. Sign Co., Inc., 69 F.3d 512, 519 (Fed. Cir. 1995)). In the present case, the jury was presented with conflicting expert testimony presenting a range of damages from a one-time payment of \$11,412.00 to a use-based royalty of 20% equating to roughly \$89 million. Tr. 1229, 2325. Regardless of whether the Lundeen agreement was in evidence, the jury was permitted to exercise its judgment and award damages at 5% of stent sales, or \$22.35 million.

In this regard, the facts of Micro Chem. are very analogous. In that case, the defendant's expert opined that an appropriate royalty should be based on a percentage of sales, resulting in damages of approximately \$13,500. Micro Chem., 317 F.3d at 1390. The patentee's expert opined that a reasonable royalty should be based on use of patented system and that a license of \$400 per month per system was appropriate. Id. The jury

adopted the patentee's methodology but awarded only 50–66% of the amount advocated by the patentee. Id. at 1394.

The Federal Circuit affirmed the verdict, stating that the case was a "classic example of competing experts" and that the Defendants "may not like the jury verdict, but it was the result of a fair trial, fairly fought." Id. The same is true here. After weighing all of the evidence, the jury awarded Spectralytics' 25% of the damages that it believed it was entitled to and that it presented evidence to support. While Spectralytics is disappointed that the jury did not award the full amount of damages that it requested, Spectralytics also recognizes that the jury is entitled to reach its own determination on the measure of damages. Defendants should do the same.

II. DEFENDANTS' REQUEST FOR REMITTITUR SHOULD BE DENIED

For the same reasons discussed above, Defendants' request for a remittitur should also be denied. The jury's damages award is well supported by the evidence, and there is no reason to disturb it.

III. DEFENDANTS' REQUEST FOR A NEW TRIAL SHOULD BE DENIED

A. Legal Standard

A motion for a new trial under Rule 59 is appropriate only if the verdict is "so contrary to the evidence as to amount to a miscarriage of justice." Butler v. French Trucking Co., 83 F.3d 942, 944 (8th Cir. 1996); Fed. R. Civ. P. 59. Put another way, the standard for ruling on a motion for a new trial is whether the verdict is against "the great weight of the evidence." Butler, 83 F.3d at 944. In determining whether to exercise its discretion, the court is "not free to reweigh the evidence and set aside the jury verdict

merely because the jury could have drawn different inferences or conclusions or because judges feel that other results are more reasonable." Tennant v. Peoria & Pekin Union Ry., 321 U.S. 29, 35 (1944).

When a party claims that certain error requires a new trial, the court should grant a new trial only where such error affected the "substantial rights" of the affected party. Fed. R. Evid. 103(a). Specifically, "[t]he error must be such that a new trial 'would be likely to produce a different result.'" Pointer v. DART, 417 F.3d 819, 822 (8th Cir. 2005) (citation and internal quotations omitted).

When a party claims that opposing counsel engaged in improper conduct during closing argument but failed to lodge any timely objection to such conduct, the objection is waived and the matter is reviewed only for "plain error." Billingsley v. City of Omaha, 277 F.3d 990, 997 (8th Cir. 2002); Cross v. Cleaver, 142 F.3d 1059, 1067 (8th Cir. 1998). If a timely and adequate objection was lodged, and no curative instruction was given, a new trial should be granted only if the argument "causes prejudice to the opposing party and unfairly influences a jury's verdict." See Alholm v. Am. Steamship Co., 144 F.3d 1172, 1181 (8th Cir. 1998) (citation omitted). Stated another way, "[t]o constitute reversible error, statements made in oral arguments must be plainly unwarranted and clearly injurious." Vanskike v. Union Pacific R.R. Co., 725 F.2d 1146, 1149 (8th Cir. 1984) (citation omitted).

B. The Verdict Was Not Against the Weight of the Evidence

As discussed in the previous sections, there was strong evidence to support every aspect of the jury's verdict. Defendants' motion for a new trial should be denied.

C. There Was Nothing Improper About Spectralytics' Presenting Evidence of Copying

In its opening argument, Defendant Cordis purported to present a chronological history of the development of the technology at issue, starting first with RMS (Tr. 181–88), then moving on to Norman Noble (Tr. 188–91), and finally to Spectralytics (Tr. 191–95). Cordis argued that this earlier development by RMS and Norman Noble demonstrated the obviousness of the '277 patent claims:

It's not an invention. It's an obvious solution for skilled tool making, *which is why skilled tool makers like John Dunbar and Norman Noble came up with it before Gary Gustafson did.*

Tr. 191 (emphasis added). Cordis further argued that the PTO only issued the '277 patent because "[t]hey didn't know what Norman Noble was doing in '95." Tr. 195. Having chosen to base their invalidity defense on a claim that Norman Noble independently developed the invention before Gustafson did, Defendants have no legitimate basis to complain when Spectralytics presents evidence and argument to rebut that claim.

As discussed in Section I.C.2.b.(2), supra, there is more than sufficient evidence that the invention was conceived of prior to the August, 1995 visit by Norman Noble, such that Norman Noble could have copied the invention from Spectralytics. Defendants do not directly attack this evidence but, instead, continue to complain about the fact that this evidence was not brought forth in response to Norman Noble's motion for summary judgment of no trade secret misappropriation. Defendants' Brief 57–58. While it may be in a party's best interest to submit every piece of evidence that it has in response to a summary judgment motion, there is no legal requirement that a party do so. This Court

recognized that Spectralytics would not be precluded from presenting evidence of copying resulting from the August 24, 1995 meeting for the purpose of proving trade secret misappropriation. Pretrial Tr. 36–38.¹¹ If Spectralytics would not even have been precluded from offering such evidence in connection with the very issue for which summary judgment was sought, it certainly was not precluded from offering that evidence in connection with the completely different issue of alleged independent development.

D. Defendants Have Wholly Failed to Show That Any of the Alleged Mis-Statements During Closing Arguments Merit a New Trial

Defendants present a list of *fifteen* allegedly improper statements made during closing arguments. At the end of closing arguments, however, Defendants identified only three allegedly improper statements made by Spectralytics' counsel during closing arguments. Tr. 3017. The Court rejected two of them and granted a curative instruction on the third. Tr. 3022–23. Having failed to even object to twelve of the allegedly improper statements during trial, those objections are now waived and can be reviewed only for plain error. Billingsley, 277 F.3d at 997; Cross, 142 F.3d at 1067.

Moreover, even if the Court were inclined to overlook Defendants' waiver, the Court should still deny the motion. The jury was specifically instructed before trial even began that "[s]tatements, arguments, questions and comments by lawyers are not evidence." Tr. 88. "This instruction effectively neutralized any prejudicial impact" of the

¹¹ The Court ultimately dismissed Spectralytics' trade secret claim, not because Spectralytics could not seek to prove theft arising out of the August 24 meeting, but because the Court concluded that Spectralytics had failed to present any evidence of damages associated with the alleged theft of trade secrets. Pretrial Tr. 50–55.

now-complained about arguments. Alholm, 144 F.3d at 1182. Defendants also do not even try to show how the non-complained about arguments are "plainly unwarranted and clearly injurious." Vanskike, 725 F.2d at 1149 (citation omitted). Nor do they try to "make a concrete showing of prejudice." Id. Their failure to do so is further reason to reject Defendants' complaints.

The Court should also keep in mind the following from the Eighth Circuit:

After reviewing the record, this court finds no statements so prejudicial as to require reversal in this case. While the court does find oratorical exaggeration and provocative remarks in the closing arguments of counsel for both plaintiff and Defendants, there is nothing in the record which strikes this court as plainly unwarranted or completely beyond the province of counsel in attempting to impress certain views on the minds of the jury. This court holds the fundamental belief that jurors are intelligent, discerning people and that they can usually sort out emotional and passionate arguments and follow what the court tells them to do.

Vanskike, 725 F.2d at 1149.

Spectrallytics nonetheless addresses each of the fifteen complaints *in seriatim* below.

(1) The statement about "stealing someone's car" was made in reference to Defendants' damages case—particularly, their argument that there were acceptable noninfringing alternatives (Tr. 3010–11)—not in reference to whether they copied Spectrallytics' idea. Regardless, both parties and the Court knew from day one that Spectrallytics contended that Defendants' stole its idea. Tr. 145–46; 221.

(2) Counsel did not argue that because Norman Noble had taken away Jack Lundeen that that was a reason to "punish the Defendants." The taking away of Mr.

Lundeen was part and parcel of the evidence showing that the Nobles were desperate and likely not to have independently developed the idea. Tr. 2975.

(3) It was properly pointed out that Lundeen's five percent commission was "a data point that you can consider when you arrive at what you think is a fair royalty in this case." See Section I.E.3, supra.

(4) The Court instructed the jury to consider deposition testimony as if it was live. Tr. 3031.

(5) The statement complained about by Defendants simply characterized the evidence as viewed favorably by Spectralytics. The Dunbar and Press testimony has been discussed above. And as the Court instructed the jury, "[y]ou may believe all of what a witness says, or only part of it, or none of it." Tr. 3029.

(6) The jury knew that Mr. Nixon did not give an opinion about whether the patent office made a mistake and counsel did not say that Mr. Nixon gave that opinion. The transcript should have included a period—not a comma—after "He said, you know, that can happen" Tr. 3007. Regardless, the Court previously refused to give any curative instruction with respect to this issue because the jury had it within its own power to remember what Nixon (or any other witness) either did or did not say.

(7) Defendants argue that counsel suggested the patent office was aware of the Swiss machine. The complained-of statement was in response to Mr. Diskant's assertion that the patent office was not aware of Swiss machines, and the statement was that "he [Diskant] has no way of knowing what the examiner knew."

(8) Noble's counsel told the jury that "they did have over 50 years of machining expertise. And . . . [t]his case is about toolmaking. And the Nobles are expert toolmakers." Tr. 2897. The testimony, even by Defendants' witnesses, reflected that technically trained persons were called "engineers" even in the absence of such degrees or any evidence that they had coursework equivalent to those with such degrees. E.g., Tr. 2223, 2227, 2284 (testimony by Dobbins, who did not go to college, that he currently worked as an "engineering fellow," was an "engineer expert," and that his first job after leaving the armed forces was as an "engineer"). Thus, characterizing the Nobles as having "extraordinary skill" and "engineers" is consistent with Defendants' own statements and the evidence. Regardless, the Court already rejected this argument and explicitly instructed the jury what level of skill to use in connection with evaluating the validity of the patent.

(9) The reference to the "average Joe" at page 2994 was a continuation of the description that Mr. Nixon gave about the person of ordinary skill and was completely accurate. The Court's instructions explicitly instructed the jury what level of skill to use in connection with evaluating the validity of the patent.

(10) Spectralytics' argued that "[i]f that tube slides in the bushing, the bushing is slightly greater than." Tr. 3012. This is consistent with witness testimony that one of skill in the art would consider a bushing bore to be sized slightly greater than the tubing if the tubing slid within the bore. Tr. 402, 614, 649, 967, 1111.

(11) Spectralytics properly made the point that Cordis "had the power to select a person of ordinary skill that could have disagreed with Mr. Madson, and there is nobody

here that disagrees with Mr. Madson." That is absolutely true. As for Defendants' expert, he was not excluded. Cordis withdrew him as a witness. They did not select a person of ordinary skill to testify. That was within their power.

(12) Spectralytics did not ask the jury to draw an adverse inference from Defendants' failure to waive privilege. It asked the jury to draw an adverse inference from Defendants' failure to *call* Mr. Coletti, the person who wrote Spectralytics a letter making statements about the patent. Mr. Coletti could have explained his letter without waiving any attorney/client privilege. Instead, Cordis relied upon the letter and asked the jury to draw inferences from that that Mr. Coletti had a pure state of mind.

(13) The Mitelberg patent specifically calls out the '277 patent. P-76 at col.2 ll.12–15. And Defendants cross-examined Gary Oberg about such patent. Tr. 430–36. The jury could read the patent themselves and decide whether the patent "applauded" the invention.

(14) The willfulness determination is a way to send a message to the Defendants and it is not entirely objective. Jury instruction No. 15 specifically said that the Defendants' state of mind was irrelevant in the first two parts in the four elements that had to be proved by clear and convincing evidence. Docket No. 361 at 15. But the third and fourth are clearly subjective, i.e., that the defendant was aware of the patent and that it knew, or should have known, that its actions infringed a valid patent.

(15) Spectralytics did not urge the jury to consider Cordis's size and insistence on defending itself, and certainly not in determining damages. Moreover, given Defendants' arguments that they were part of a benevolent corporate empire that "takes

care of lots of people" (Tr. 2954), Spectralytics would have been permitted to suggest that Defendants might not be as magnanimous and beneficent as they would like to appear.

Finally, the allegedly improper statements by Spectralytics' counsel pale in comparison to the over-the-top rhetoric employed by Defendants' counsel. Even during trial, Defendants' counsel routinely characterized Spectralytics' case as "frivolous" and "foolish." E.g., Tr. 1400 (questioning about there allegedly being "no valid basis for the patent" and "frivolous allegations"); Tr. 2551 ("I have to say this is the most foolish case I have seen in my years of practice."); Tr. 2553 (characterizing lawsuit as "foolish").

Defendants' counsel turned the rhetoric up even further in its closing argument. Counsel told the jury that the patent was "foolish" and "trivial" (Tr. 2937), and that "I think these claims are baseless." Tr. 2947.¹² Counsel then went over the top:

[T]his case is a *shake down*. This case does *not belong in the legal system*. We shouldn't be here.

* * * *

But they can't *shake us down*. They cannot, cannot threaten Johnson & Johnson with a *frivolous lawsuit* and expect to be paid off. If Johnson & Johnson paid every *worthless patent* that came knocking at the door, you would not imagine how much money it would be paying. This case *doesn't belong in court*. This case is a *shake down* on a *worthless patent*.

Tr. 2953–54 (emphasis added); see also Tr. 2955 ("A frivolous, meritless patent" and "this meritless lawsuit").

¹² It is well recognized that such statements of personal opinion by counsel "have no place in a closing argument of a criminal or civil trial." Polansky v. CNA Ins. Co., 852 F.2d 626, 628 (1st Cir. 1988) (citations omitted).

Having made such inappropriate comments, themselves, Defendants' cannot be heard to complain now.

Respectfully submitted,

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By its attorneys,

Dated: April 2, 2009

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